

Distortion of the Scribal Hand in the Images of Clement's Letter to Theodore

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Abstract

This article discusses Morton Smith's famous manuscript find, Clement's Letter to Theodore (including the so-called Secret Gospel of Mark), and critically assesses Stephen C. Carlson's study of its handwriting (2005). Carlson's analysis is found to be wanting due to line screen distortion introduced by the halftone reproduction process in the images he used. We conclude that the script in the manuscript of Clement's Letter to Theodore lacks all and any kind of "signs of forgery".

Keywords

Clement of Alexandria, forgeries (modern), handwriting analysis, Letter to Theodore, Secret Gospel of Mark

Introduction

Robert Morton Smith (1915–1991) narrates the discovery of Clement's Letter to Theodore in detail in his popular treatise on the Secret Gospel of Mark.² Smith entered the ancient monastery of Mar Saba in the summer of 1958 in order to search for and catalogue the manuscripts present in the tower library. Towards the end of his stay he stumbled upon three pages of

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¹) We wish to thank Scott G. Brown and Allan J. Pantuck for their extensive criticism and helpful suggestions.

²) M. Smith, *The Secret Gospel: The Discovery and Interpretation of the Secret Gospel According to Mark* (New York 1973) 1–25.

handwriting on previously blank end pages of a copy of Isaac Vossius' *Epistulae genuinae S. Ignatii Martyris* (1646). In Smith's translation, the first line of the handwritten text read: "From the letters of the most holy Clement, the author of the Stromateis. To Theodore". Smith photographed the letter thrice in black-and-white. The book with Clement's letter remained in the monastic library.

This previously unknown Clementine letter discusses a version of the Gospel of Mark that Theodore (of whom we otherwise know nothing) had encountered in the hands of the Carpocratians, a group of early Christians known to scholars principally from the writings of Irenaeus and from other Clementine writings. According to Clement in his Letter to Theodore, Mark the evangelist had expanded his earlier composition into a "μυστικὸν εὐαγγέλιον" (Theod. II.6, 12; Smith translated these words as "secret Gospel") in Alexandria. The Carpocratians, however, used yet another version of the Gospel; one that according to Clement contained "utterly shameless lies" (Theod. II.8-9). To combat the misinformation Theodore would have heard from the Carpocratians, Clement quotes two passages from the Secret Gospel of Mark. The longer passage, Clement says, is located between Mark 10:34 and 10:35, and the shorter one is an addition to the first sentence in Mark 10:46:

And they come into Bethany. And a certain woman whose brother had died was there. And, coming, she prostrated herself before Jesus and says to him, "Son of David, have mercy on me." But the disciples rebuked her. And Jesus, being angered, went off with her into the garden where the tomb was, and straightway a great cry was heard from the tomb. And going near Jesus rolled away the stone from the door of the tomb. And straightway, going in where the youth was, he stretched forth his hand and raised him, seizing his hand. But the youth, looking upon him, loved him and began to beseech him that he might be with him. And going out of the tomb they came into the house of the youth, for he was rich. And after six days Jesus told him what to do and in the evening the youth comes to him, wearing a linen cloth over his naked body. And he remained with him that night, for Jesus taught him the mystery of the kingdom of God. And thence, arising, he returned to the other side of the Jordan (Theod. II.23-III.11).

And the sister of the youth whom Jesus loved and his mother and Salome were there, and Jesus did not receive them (Theod. III.14-16).³

³) Translation by Smith; M. Smith, *Clement of Alexandria and a Secret Gospel of Mark* (Cambridge, Mass. 1973) 447.

Clement's Letter to Theodore remained in the monastery of Mar Saba for almost two decades. Guy G. Stroumsa testified in 2003 that he and three other scholars from the Hebrew University of Jerusalem⁴ travelled to the monastery in 1976 and found Vossius' book with Clement's letter on one of the library shelves. Led by Archimandrite Meliton, the group brought the book to the Orthodox Patriarchate Library in Jerusalem. Unfortunately, scientific analysis of the ink could not be conducted, for Meliton refused to hand the book over to the Israeli police for testing.⁵ The manuscript pages were subsequently removed from Vossius' book and photographed in colour by the head librarian Kallistos Dourvas.⁶ The pages have, however, since disappeared, and scholars have had to settle for working with the two sets of published photographs.⁷

The debate over Clement's letter since the publication of its critical edition in 1973⁸ has been analysed elsewhere by one author of this article.⁹ During the subsequent thirty years or so, the lack of the physical manuscript translated into low interest regarding the handwriting of Clement's letter—most scholars were content to note that the script fit well with other hands of the eighteenth century, and left it at that.

A major change, however, took place with Stephen C. Carlson's *The Gospel Hoax: Morton Smith's Invention of Secret Mark* (2005), which energetically sought to demonstrate that Smith wrote the document himself. One of Carlson's premises was the notion that forgeries were always produced according to the needs and wants of the forger's own time frame, and that the passing of time would enable critics to spot the anachronistic subtexts with increasing ease. Consequently, inauthenticity could be established without access to the physical manuscript.¹⁰ Carlson's case was built

⁴ The others were David Flusser and Shlomo Pines, both professors at the university, and Archimandrite Meliton from the Greek Orthodox Patriarchate of Jerusalem.

⁵ G.G. Stroumsa, "Comments on Charles Hedrick's Article: A Testimony", *Journal of Early Christian Studies* 11 (2003) 147-153.

⁶ C.W. Hedrick and N. Olympiou, "Secret Mark: New Photographs, New Witnesses", *The Fourth R* 13 (2000) 3-16.

⁷ Smith's black-and-white photographs were published in Smith, *Clement of Alexandria and a Secret Gospel of Mark*, 449, 451, 453. Kallistos' colour photographs were published in Hedrick and Olympiou, "Secret Mark", 3-16.

⁸ Smith, *Clement of Alexandria and a Secret Gospel of Mark*.

⁹ T.S. Paananen, "From Stalemate to Deadlock: Clement's Letter to Theodore in Recent Scholarship", *Currents in Biblical Research* 11 (2012) 87-125.

¹⁰ S.C. Carlson, *The Gospel Hoax: Morton Smith's Invention of Secret Mark* (Waco, TX 2005) 14-15.

upon alleged anachronisms, jokes and clues that placed the production of Clement's Letter to Theodore in the twentieth century, supplemented with "means, motive, and opportunity" focused on Smith, and topped with a handwriting analysis. In the latter he identified numerous suspicious details from the script, including blunt ends at the beginnings and ends of the lines, unexpected pen lifts, poor line quality interpreted as "forger's tremor", and retouching of the letters. For Carlson, all this points to an imitator trying to imitate a rapid cursive eighteenth-century hand by slowly drawing the letters.¹¹ The true identity of the scribe was betrayed by certain "modern letter forms" which Carlson linked to the handwriting of Smith.¹² Of all the individual arguments in *The Gospel Hoax*, it was the handwriting analysis that received the most extensive praise from the guild. Many scholars were explicit in their endorsement and declared it to be the strongest part of Carlson's overall case.¹³

Line Screen Distortion

Surprisingly, for many years no one drew attention to the images Carlson used for his study, no doubt due to the general ignorance of the processes involved in transferring photographs into digital or printed media.¹⁴ Yet an understanding of these processes is critical to understanding the conclusions Carlson drew from his analysis. It should be noted, first of all, that an

¹¹ Ibid., 28-29, 31.

¹² Ibid., 25, 35, 71, 73. This line of argument has been effectively debunked in S.G. Brown, "Factualizing the Folklore: Stephen Carlson's Case against Morton Smith", *Harvard Theological Review* 99 (2006) 298-306.

¹³ P. Foster, "Books of the Month: Secret Mark is no Secret Anymore—Secret Mark: Uncovering a Hoax", *Expository Times* 117 (2005) 64-68; M.J. Kruger, "Book Reviews: *The Gospel Hoax: Morton Smith's Invention of Secret Mark*. By Stephen C. Carlson", *Journal of the Evangelical Theological Society* 49 (2006) 422-424; C. Tuckett, "Review: *The Gospel Hoax: Morton Smith's Invention of Secret Mark*. By Stephen C. Carlson", *Journal of Theological Studies* 58 (2007) 193-195. For more in-depth treatment of Carlson's reception, consult Paananen, "From Stalemate to Deadlock", 9-10.

¹⁴ Brown is an exception, though, since he already in 2005 asked the right question though decided not to pursue the matter at that time; S.G. Brown, "Reply to Stephen Carlson", *Expository Times* 117 (2006) 145. Eventually, he made a brief study of the differences between various reproductions of Clement's Letter to Theodore, yet these observations have not received the attention they deserve; S.G. Brown, "My Thoughts on the Reports by Venetia Anastasopoulou", *Biblical Archaeology Review* 37 (2011) 10-14, <http://www.bib-arch.org/scholars-study/secret-mark-handwriting-response-brown.pdf>.

original photograph and its reproduction are not identical. Melissa M. Terras cautions us that “relying on computational systems . . . can insert further uncertainty into the representation of the text created”. Specifically, she refers to “distortion caused by lens shape, difficulties in colour management and reproduction, and the unintentional introduction of ‘artefacts’ into images, which can have an effect on the resulting image.”¹⁵ Stressing the importance of using high quality images in the study of ancient texts, she nevertheless knows of no instances in which the process of digitalization would have produced erroneous readings, as “artefacts and errors” in reproductions have a tendency to be fairly obvious.¹⁶

Smith's camera work in 1958 produced black-and-white photographs that were *continuous tone images*. In such images, the density in any specific point is white, black or any shade of grey in between.¹⁷ The images are accordingly made of various shades of grey.¹⁸ However, when a continuous tone image is printed in black-and-white, either in a digital printer or in a printing press, there is only one colour involved, and that is the colour of the print medium (e.g. ink or toner), which is usually black. Any specific point in the printed image is either black or without ink, showing just the background colour of the print material (e.g. paper), which is normally whitish.¹⁹

While the reproduction of text and line art (i.e. *full-tone images*) presents no problem for the printer, there are major difficulties in rendering photographs correctly. Continuous tone images must be converted into *halftone images* before printing, to better reproduce all of the nuances in the original image. This conversion is done by adding screens to the image so that it dissolves into tiny monochrome dots, which will fool the eye into seeing shades of grey (or of colour) at a suitable distance, when in reality there are

¹⁵ M.M. Terras, “Artefacts and Errors: Acknowledging Issues of Representation in the Digital Imaging of Ancient Texts”, in F. Fischer, C. Fritze and G. Vogeler (eds.), *Kodikologie und Paläographie im digitalen Zeitalter 2 / Codicology and Palaeography in the Digital Age 2* (Norderstedt 2011) 45.

¹⁶ *Ibid.*, 51, 56.

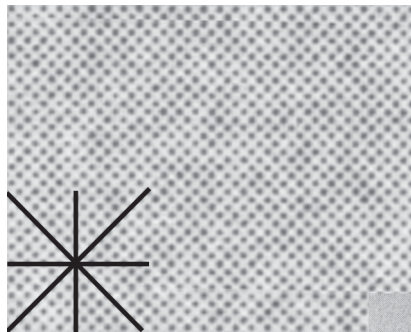
¹⁷ Although a developed black-and-white photograph is seemingly a continuous tone image and made up of all shades of grey, this is not entirely true on a microscopic level where the film is simply granular, composed of two colours.

¹⁸ C.J. Biermann, *Handbook of Pulping and Papermaking* (London 1996) 469.

¹⁹ R. Pettersson, *Visual information* (Englewoods Cliff, New Jersey 1993) 320. Printing in colour follows the same principle, but for any specific point there are more options available, usually CMYK, i.e. cyan, magenta, yellow and the key colour (black).

only black (or single colour) dots with spaces between them. In modern printers, this screen is produced digitally. In a printing press, like the one that printed *Clement of Alexandria and a Secret Gospel of Mark* in 1973, the technique was different. With analogue technology, the developed photograph would have been photographed a second time with a reproduction camera, using a raster to create a *raster image*—one with a *line screen* present. This new image would have then been copied a second time to a photosensitive plate used in the printing press to actually print the image.²⁰

A line screen can be described as lines made out of separate dots, yet organised in straight lines separated by the same distance and reproduced at a fixed angle. The following illustration is an enlarged scanned image of a small section of the third page of the printed black-and-white photograph of Clement's Letter to Theodore in Smith's book. It is magnified enough so that the dots can be seen with the naked eye. Without magnification, the area will appear to be grey, as illustrated by the same magnified area reduced to its actual size in the small grey rectangle at the lower right corner of the image. The black lines at the lower left corner are added to the picture in order to demonstrate how symmetrically the dots are arranged, and that the angle of the line screen is exactly 45 degrees. Here the rich visual information is condensed to a series of dots, and the eye is fooled into seeing shades of grey from a normal viewing distance, because the white and black areas merge with each other. If more dots are present or they are larger in diameter, the area appears to be darker, and vice versa.



²⁰ Biermann, *Handbook of Pulping and Papermaking*, 469; Pettersson, *Visual information*, 328–329.

Line screen halftone is normally used with continuous tone images only, since it would damage the readability of letters in full-tone images. But in order to better reproduce the background paper, the images of Clement's Letter to Theodore were printed in halftone. In practice this means that from a normal viewing distance the text appears fairly smooth. The separate letters, however, will not appear smooth once the magnification renders the dot matrix visible.

When these halftone images are magnified to the degree necessary for forensic document examination, lines that are not both perfectly straight and at an angle that accords with the screen (i.e. horizontally, vertically, or above all at 45 or 135 degrees) are not reproduced accurately. Whenever one reproduces a given line at a different angle, the line of dots from the line screen (in its fixed angles) will be added to that line, changing its appearance. In his study of the handwriting of Clement's Letter to Theodore, Carlson opted to use the halftone reproductions found in *Clement of Alexandria and a Secret Gospel of Mark*,²¹ supplemented by those in "Secret Mark: New Photographs, New Witnesses",²² instead of studying the colour photographs themselves or scans made directly from those photographs. We feel this mistake, though it invalidates all of Carlson's handwriting analysis, is easy to make, for as Terras has noted, "[i]t is rare that those utilizing digital images for scholarly research would stop to consider the mechanics which produced that image, or their accuracy or veracity."²³ When Carlson was previously asked to specify which images he had used in his study, he answered that he had "consulted both the black-and-white photographs that Smith published in 1973 as well as the color photographs that Charles Hedrick published in 2000."²⁴ But neither of these was a "photograph". Instead, they were offset printed reproductions of photographs, unsuitable for the questioned document examination as it was practised in Carlson's analysis.²⁵

Below we will discuss illustrative examples of spuriousness that Carlson presented in *The Gospel Hoax* as evidence of forgery.²⁶ For comparison

²¹ Smith, *Clement of Alexandria and a Secret Gospel of Mark*, 449, 451, 453.

²² Hedrick and Olympiou, "Secret Mark", 3-16.

²³ Terras, "Artefacts and Errors", 53.

²⁴ Carlson answered on his blog *Hypotyposeis* on January 20, 2010; <http://hypotyposeis.org/weblog/2010/01/diogenes.html>.

²⁵ Cf. O. Hilton, *Scientific Examination of Documents* (Chicago 1956) 282-283.

²⁶ This has previously been analyzed at length in two on-line articles by one author of this paper; R. Viklund, "Reclaiming Clement's Letter to Theodoros—An Examination of Carlson's

material, we have used images digitally scanned in 1200 dpi (dots per inch) directly from the colour photographs taken by the librarian Dourvas in the late 1970s; the same photographs that were published (in halftone) in *The Fourth R* in 2000.²⁷ The original scans were highly magnified before being printed in this article. It should be noted clearly that the order of image manipulation is the most important point that separates our study from that of Carlson's: none of the images presented below as comparison examples underwent halftone manipulation as part of the printing process *before* they were magnified. Images from Smith's book have also been scanned in 1200 dpi. While our scanner has also created the images out of tiny square pixels, the much higher resolution will make them so small that they can be disregarded in comparison. In order to show that this was not an issue between the colour and the black-and-white photographs, but only between originals and reproductions, we will also present one letter that is digitally scanned directly from Smith's original black-and-white photographs.

Blunt Ends at the Beginnings and Ends of the Lines

Carlson sees blunt ends "at the beginnings and ends of the lines". His interpretation: "the strokes were written so slowly that the pen had come to a complete stop at the ends of the strokes."²⁸ In the letter *tau* of the word *τοῦ* in Theod. I.1, "the first stroke starts with a flying end, indicating some speed, but then pauses halfway in the middle of the letter and hesitates at the end, resulting in two large ink blobs".²⁹ This is a textbook example of line screen distortion. As can be seen in the colour image on the right, the scribe has

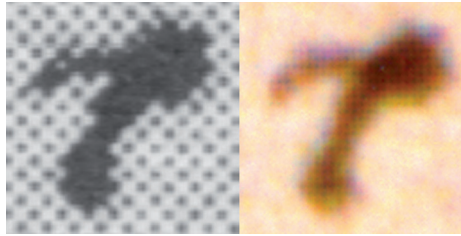
Handwriting Analysis" (2009), <http://www.jesusgranskad.se/theodore.htm> (in which all the examples presented by Carlson were examined and compared to the other letters in Clement's Letter to Theodore; Viklund found the letter to be consistent overall and had problems spotting many of the irregularities Carlson referred to); R. Viklund, "Tremors, or Just an Optical Illusion? A Further Evaluation of Carlson's Handwriting Analysis" (2009), <http://www.jesusgranskad.se/theodore2.htm> (in which images scanned directly from the colour photographs of the letter were compared to images scanned from the printed plates in Smith's *Clement of Alexandria and a Secret Gospel of Mark*; Viklund concluded that "tremors" and other signs of inauthenticity were obvious only in the printed images, but not in the originals).

²⁷ Hedrick and Olympiou, "Secret Mark".

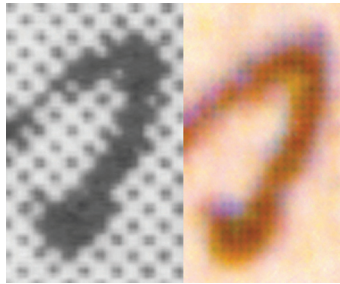
²⁸ Carlson, *The Gospel Hoax*, 28.

²⁹ *Ibid.*, 29.

made a narrow loop at the top and ended at the bottom with a swift hook to the right. The black-and-white image on the left has massive blobs in both places. When these low-resolution black-and-white images are highly magnified (in reality, this *tau* is no more than 1.7 mm high) the shading at the ends of the letters cannot be shown, as they have been reconstructed by just a few large dots. All shades between black and white are lost during this process.



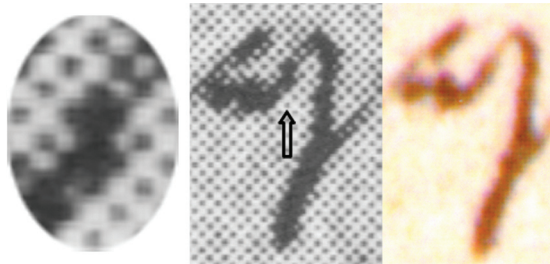
Another example of “the most egregious hesitations that resulted in ink blobs” is the letter *iota* in ἐπιστολῶν (Theod. I.1).³⁰ Once again, a massive blob can be seen at the end of the letter in the image studied by Carlson, while the scan made directly from the photograph instead reveals a hook upwards and to the left, but no ink blob. Both examples illustrate the impossibility of rendering small details with a faded surrounding in the black-and-white printed (halftone) reproductions. Numerous other examples could be presented.



³⁰ Ibid., 28.

Pen Lifts, Retakes and Retouching

Carlson claims that on several occasions the pen stops, gets lifted, and begins anew trying to maintain the continuous line. In the principal example Carlson presents, the line between the letters *epsilon* and *kappa* in the word ἐκ (Theod. I.1), there is, in fact, a pen lift.³¹ But this is due to the fact that the scribe (apart from maybe the corrected ἀποθνήσκων in Theod. I.28) never connects the letter *kappa* to its preceding letter. In all other instances presented by Carlson, these so-called pen lifts are found only in the printed reproductions. The lines have been contorted by the line screen applied during the printing process, which creates the illusion of hesitation, retakes, or unnatural shifts in direction. Carlson finds one of these pen lifts “between the *epsilon* and *gamma* of γεγόνασιν” in Theod. I.7.³² In the printed image it looks as if the two letters are written separately. The place of their alleged connection is enlarged in the ellipse. As can be seen, the line from the letter *epsilon* follows the 45 degree angle of the line screen, turns straight upwards along the vertical line and then turns right to follow the 45 degree angle again. Lines written at angles that are not possible to accurately reproduce in the printed images will appear to be stepped, giving the incorrect visual impression of a pen lift and of a new stroke being begun on a different level. The colour image, however, reveals that the real angle of the line is about 60 degrees and that the line is continuous rather than stepped and interrupted.



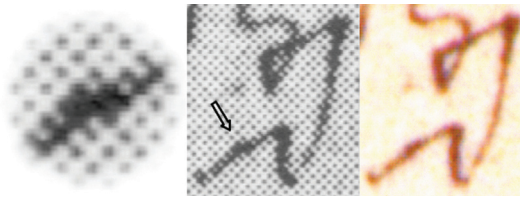
Another example is the left leg of the letter *lambda* in δοῦλοι (Theod. I.7), in which Carlson sees “[u]nnatural pen lifts” in place of a smooth curve.³³

³¹⁾ Ibid., 28.

³²⁾ Ibid., 30.

³³⁾ Ibid., 30.

But the seemingly broken line of the leg appears to contain a retake in the printed image only; its appearance is solely due to the fact that the line, which at this point is at an angle of perhaps 35 degrees, moves from one line of dots (at an angle of 45 degrees) over to another. This letter *lambda*, according to Carlson, should also exhibit “a lot of retouching”.³⁴ It is not obvious, however, when one examines the actual photographic image, where the retouching should have taken place.



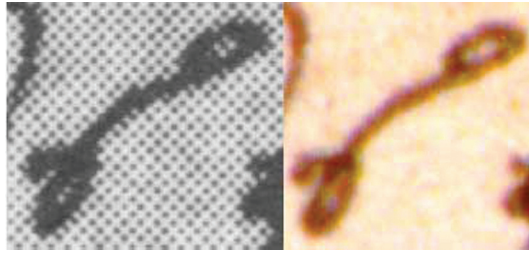
Tremors Due to Slow Writing

Finally, there is the almost eponymous “forger’s tremor”, a catch phrase that has been repeated in practically all of the discussions of *The Gospel Hoax*. Carlson writes: “The ‘forger’s tremor’ appears in the shaky quality of lines that should be smooth curves.”³⁵ The curves, however, have lost their smoothness only in the low-resolution raster-images which Carlson used. As noted above, lines which are at angles deviating from the angles produced by the line screen will appear stepped, and these artefactual steps introduced by the printing process could easily be mistaken for poor line quality. Carlson finds the tremor apparent in the long line connecting the *omicron-epsilon* ligature and the following circumflex accent in the second $\tau\omicron\upsilon$ in Theod. I.1.³⁶ But the line appears stepped only in the printed image. In the photographs, the continuity and smoothness of the line are readily apparent.

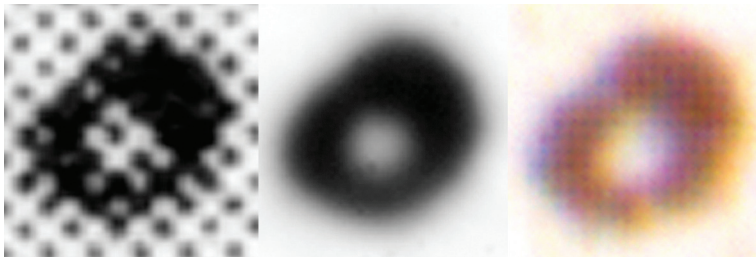
³⁴) Ibid., 30.

³⁵) Ibid., 28.

³⁶) Ibid., 28.



For one last example, Carlson finds four *omicrons* that are “so shakily written as to appear square rather than circular.” One of these examples is found in the first *omicron* of the word φιλοσοφίαν in Theod. III.18.³⁷ We present three different images of the letter below. On the left is a scan from Smith’s book, in the middle a scan from Smith’s original black-and-white photograph, and on the right a scan from the colour photographs taken by Dourvas, all in 1200 dpi. It is evident that this tiny *omicron* is quite round in both the black-and-white and the colour photograph. Only in the printed image on the left does the letter *omicron* appear to have a square shape. When a small circle is created with these dots (in fact, this *omicron* is slightly less than 1 mm in diameter counted from the outer edges), it is mainly following the lines of dots at angles of 45 and 135 degrees, forming a square standing on its corner. If one looks at the inner circle in the centre of the *omicron* of the printed image, one can see that it is composed of *only four white squares*. Consequently, the surrounding black dots have no option other than to follow the lines of dots at angles of 45 and 135 degrees. The same holds true for the outer circle, as well.



³⁷ Ibid., 28, 31.

The Legacy of Line Screen Distortion

In sum: all the signs of forgery Carlson unearthed in his analysis of the handwriting in Clement's Letter to Theodore disappear once we replace the printed images Carlson used with the original photographs. Looking at the artefacts, Carlson concluded that the "apparently hurried cursive was executed more slowly than it purports to be" and that the "writer had not fully mastered the style of handwriting".³⁸ An opposite conclusion has recently been reached (independently of us) by Venetia Anastasopoulou, who had access to the high-quality images of the manuscript, and possesses professional training, degrees, and experience in the field of forensic document examination. For Anastasopoulou, the script in Clement's Letter to Theodore is "written spontaneously with an excellent rhythm", while the "movement of the writing indicates a hand used to writing in this manner".³⁹

Though Carlson is to be commended for his insight that the tools of forensic document examination could advance the debate, the execution of his project has left much to be desired. Based on the comparison of the images presented above we suggest that there is no "forger's tremor" or any other "signs of forgery" to be found in the script of Clement's Letter to Theodore. Consequently, one of the key arguments in Carlson's *The Gospel Hoax* can be finally laid to rest.

³⁸) Ibid., 35.

³⁹) V. Anastasopoulou, "Experts Report Handwriting Examination", *Biblical Archaeology Review* 36 (2010) 9, <http://www.bib-arch.org/pdf/secret-mark-analysis.pdf>. We asked Anastasopoulou for feedback on an early draft of this article. Regarding our study of the line screen distortion, she said: "I got the answer to my questions about Carlson's findings which I could not see"; personal communication.