By A. D. Crown

Amongst the Biblical scrolls in the Fisher Library of the University of Sydney is a complete Pentateuch scroll in a fine state of preservation, which is said to have been written *circa* the tenth or eleventh century A.D. This dating, if correct, would make the scroll all but unique, for, whilst there are quite a few Hebrew Biblical codices and fragments thereof which antedate this by a century or more, there are few, if any, complete Pentateuch scrolls of comparable age.<sup>1</sup> Some estimate of the value of a scroll of such antiquity may be gauged from a comparison with Margoliouth's British Museum catalogue<sup>2</sup> where the earliest listed scroll is ascribed to the fourteenth century A.D.

Since scrolls written for liturgical use may not bear any marks other than those prescribed by ritual ordinance they carry no colophons or additional information which would indicate their age and provenance. Thus, the scholar seeking to date a scroll is obliged to rely for critical judgements on such factors as calligraphic style and conformity with ritual prescripts of various ages, which factors are subject to a number of variables that add to the intrinsic difficulties of the undertaking. Whilst scribes may follow the rules laid down in the Talmud in some respects, in others they follow Sopheric traditions which are non-halachic or even in opposition to halacha:<sup>3</sup> there may be no indication in Rabbinic literature as to when new traditions began to develop. Moreover, there are, as yet, few established principles for the scholarly study of Torah scrolls as against Hebrew Biblical codices. The situation still obtains today which obtained in 1929 when Moses Gaster observed,<sup>4</sup> "The Masoretic Text... has, hitherto, served exclusively as the basis for all manner of Biblical studies .... The scroll ... was entirely neglected ... uniformity was assumed to be the characteristic feature of the scroll . . . " The critical techniques evolved in generations of study of the Masoretic Text do not, as a matter of course,

<sup>1</sup> The celebrated "Abisha" scroll of the Samaritans may be no older than the eleventh century A.D. and parts of it may well be younger according to recent estimates. See F. Perez-Castro, "El Séfer Abisha", Sefarad XIII (1953), 119-29.

<sup>2</sup> G. Margoliouth, Catalogue of the Hebrew and Samaritan Manuscripts in the British Museum (London, 1965 reprint), Pt. I, pp. 1-14.

<sup>8</sup> See below on inks.

<sup>4</sup> M. Gaster, *The Tittled Bible : A Model Codex of the Pentateuch* (London, 1929), p. 7. It is also worth noting the comments of S. A. Birnbaum, "A Synagogue Scroll", *Vetus Testamentum* IX (1959), 128, n. 1, about the need for study of synagogue scrolls..." a vast and difficult undertaking, perhaps a life (sic !) work".

apply also to the study of Torah scrolls, hence there are few precedents to draw upon for guidance and considerable caution must be exercised in drawing conclusions.

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The history of the Fisher Library scroll is uncertain. There are three sources of information about the scroll, of which two must be treated with reserve and the third is incomplete. An anonymous display card, "typed some years ago",<sup>5</sup> which is stored with the scroll when it is not on exhibition, presents some basic "vital statistics" and in addition to the suggested age of tenth or eleventh century A.D. includes the information that it is in "different hands", that it probably came from the Yemen from Karaite Jews and that it once belonged to "one of the most celebrated Semitic scholars of his day, Shapira ", presumably M. W. Shapira (1830-1884), dealer in scrolls, MSS., suspect antiquities, and a possible forger whose suicide put an end to a somewhat chequered career.<sup>6</sup> (Shapira's career and reputation is a matter of interest to this study in view of the probability that he once owned the scroll.) An anonymous display card cannot be relied upon as a source of accurate information, but the probabilities are against the total invention or fabrication of the information thereon; since, with the exception of the early dating, the remaining information on the card is seen to be as accurate as can be established after detailed study, there seems no good reason to doubt that Shapira did once own this scroll though no other reference to his ownership can be found.

A second source of information is the "oral tradition" kindly related to me by Miss Wines, the Associate Librarian. This tradition is that the scroll came from, or from the vicinity of, St. Catherine's Monastery, Mt. Sinai, and came into the possession of Sir Charles Nicholson, who offered it as a gift to the British Museum. The Trustees of the Museum are said to have refused the proffered gift on the grounds that the scroll was not authentic. Sir Charles is said to have then spent a great deal of energy proving the authenticity of the scroll, and having done so to his satisfaction, presented it to the Fisher Library. The story is so close to that of the "Shapira Affair"<sup>7</sup> that one cannot but wonder whether the "oral tradition" has been coloured by the course of events in that scandal or whether we are faced with a coincidence of circumstances, but one with a happier outcome. Consideration of this tradition must be deferred.

More authentic information can be found on a foolscap leaf in Sir Charles Nicholson's handwriting, which is kept with some other Nicholson papers in the Fisher Library. Nicholson states that the scroll had been examined by C. D. Ginsburg (the editor of the "Ginsburg Bible") and was pronounced by him to "correspond in characters" with Bible MSS. of the thirteenth century A.D. in the British Museum and the Bodleian Library and to be of the same age "if not earlier". Whether the

<sup>&</sup>lt;sup>5</sup> According to the Associate Librarian, Miss B. Wines.

<sup>&</sup>lt;sup>6</sup> See J. M. Allegro, The Shapira Affair (London, 1965).

<sup>7</sup> Ibid.

latter phrasing was the source of some of the information on the display-card is uncertain. Curiously enough C. D. Ginsburg was one of the protagonists in the "Shapira Affair" acting on behalf of the British Museum.<sup>8</sup>

A further note in Nicholson's own handwriting, giving details of this and other scrolls which he presented to the library, suggests that the scroll came from the "Yemen or the Krimea" (sic !). Though Nicholson had learned Hebrew late in his life, his facility with this language does not seem to have been such as to enable him to add these details about this and the other scrolls named on his list, brief as these details are. His scholarly abilities in this field, as evidenced by a voluminous indexed notebook in his hand in the University archives, seem to have been restricted to Biblical criticism, whereas the additional data on this sheet appear to have stemmed from soneone with an expert knowledge of Rabbinic and *Sopheric* traditions. The source of this information, in all likelihood, was C. D. Ginsburg, who seems to have been Nicholson's consultant : it was probably Ginsburg who pronounced on the authenticity of the scroll. It should be noted that there were no extravagant claims to antiquity made for the other items listed on the sheet.

It is clearly impossible, on the basis of this limited information, and in view of the probability of the "oral tradition" having been coloured by the "Shapira Affair", to do more than hint at the recent history of the scroll. There is no way of knowing with certainty why C. D. Ginsburg examined the scroll, but the fact that he did so, and, apparently, went to the trouble to compare the scroll with MSS. in the British Museum and the Bodleian Library, could be a point in favour of the "oral tradition". It seems probable that Nicholson had doubts as to the age and provenance of the scroll and retained Ginsburg to examine it for him.

The real problems of the Fisher Library scroll are not the determination of what was claimed for it by Shapira but the problems which are raised in a discussion of its authenticity. Thus we are faced with the questions: Where was the scroll written? When was it written? For what purpose was it written? The first two questions are clearly dependent for their answers on the third. Only when it can be established or reasonably assumed that the scroll was written for synagogue use are we entitled to accept the apparent evidence for the date and provenance of the scroll. Any other method of procedure could lead to the acceptance of data that were deliberately manufactured for the sake of fraud.

Even the question of the relationship of the scroll to St. Catherine's Monastery is a red herring in the discussion of authenticity. That Shapira may have claimed such a relationship, with the hope of reminding potential buyers of Tischendorf's discovery of Sinaiticus, is not beyond the realms of possibility, but once it can be established, or, at least, reasonably assumed that the scroll was not *written* there, it matters not at all to the question of the origin of the scroll whether or not it found its way from the place where it was written into the hands of the monks at the monastery. That the scroll was not written at that or any other monastery would be

<sup>8</sup> Ibid., pp. 33-61.

tolerably certain if it were possible to demonstrate, as I hope to do, that the scroll was written for synagogue use and was, in fact, used in synagogue worship. The scroll certainly has every appearance of having been written for liturgical purposes.<sup>9</sup> There would be no purpose in anyone but a Jew writing a Hebrew Pentateuch scroll for *liturgical* purposes since only Jews use such items and then use only scrolls written by Jews of known repute;<sup>10</sup> a scroll written by a non-Jew would not be ritually acceptable and would not be purchased by a Jewish community. It is not impossible that a monk would go to the trouble of making a copy of a scroll for some purpose. but it is improbable that the copy would conform so meticulously to the ritual prescripts for siphre torot as does this scroll; nor would it be at all likely to present the features of careful correction and apparent usage as in the Fisher Library scroll. On the other hand, if the scroll is a genuinely ancient synagogue scroll which found its way to St. Catherine's Monastery as the "oral tradition" indicates, there would be no means now of establishing whether the claim made for its immediate origin was genuine or not.

However, if it be granted that the information that the scroll once belonged to M. W. Shapira is not totally spurious, it would be reasonable to suppose that the scroll came directly from the Yemen rather than from any other source. Three factors would seem to support this supposition. First, unusual claims about any antiquity formerly owned by M. W. Shapira should be treated with considerable reserve. There seems to be little doubt that Shapira had several times been involved in the sale of antiquities for which false claims had been made quite apart from the allegedly forged Deuteronomy scroll.<sup>11</sup> Secondly, it is known that the majority of MSS. and scrolls in Shapira's shop in Jerusalem came from the penurious Jewish community in Arabia,<sup>12</sup> a source to which Shapira himself made reference in a letter to the British Museum when he wrote:<sup>13</sup> "In MSS I have brought over from San'a . . . I often (my italics) found . . . although already eight or nine hundred years of age . . . some of the ink is as black as if written a year ago and some, more rubbed, has nearly disappeared. The same is the case with scrolls of leather ... ". Despite Shapira's " often ", which may well cast doubt on his ability to date scrolls and MSS. accurately, there cannot have been many MSS. of such antiquity: the Fisher Library scroll may have been one of these Yemenite scrolls, though it is unlikely to be as old as Shapira seems to have maintained. Thirdly, there is the evidence in Nicholson's writing that the scroll came from the "Yemen or the Krimea", a statement which probably was drawn from Ginsburg's examination and must have been based on palaeographic studies.

<sup>9</sup> For the reasons, see below.

<sup>10</sup> Cf. Sopherim  $I: I_3:$  "This is the rule; whosoever cannot act in religious matters on behalf of the public is not permitted to write a scroll of the Torah." Quotations from Sopherim and Sepher Torah are from A. Cohen, The Minor Tractates of the Talmud, 2 vols. (London, 1965).

<sup>&</sup>lt;sup>11</sup> Allegro, *op. cit.*, pp. 33-61.

<sup>12</sup> Ibid., p. 3.

<sup>&</sup>lt;sup>13</sup> Quoted *ibid.*, p. 41.

The script in which the scroll is written is of the type called in the catalogues, somewhat vaguely, "Oriental", that is, it could derive from the Yemen, North Africa, Palestine, or Spain. Though there are times when the scripts of the various localities can be distinguished and classified by experts there are also times when they blend closely and are difficult to classify.<sup>14</sup> Allowing for differences resulting from the evolution of the Hebrew script, i.e. allowing for the time scale, it would be difficult to detect local differences between the script of the Fisher scroll and Birnbaum's scripts P and T, one of which stems from Palestine and the other from the Cairo Geniza.<sup>15</sup> Despite the stricture that "Ginsburg was not acquainted with really old Hebrew Biblical manuscripts ",<sup>16</sup> he had a substantial experience with MSS. and scrolls of at least the eleventh century A.D. and later, having examined some seventyfive of these MSS. in great detail in preparation for his Bible edition and his great work on the Masorah,<sup>17</sup> and must have scanned many more in a more cursory fashion to make his selection. Even Ginsburg's more severe critics acknowledge his expertise with these "later" MSS.<sup>18</sup> If our assumption is correct that all the information on Nicholson's note is drawn from Ginsburg, then it would seem that the latter, for all his vast experience in Hebrew palaeography, would not commit himself to a provenance for the scroll beyond "the Yemen or the Krimea". It would be foolhardy to attempt to place the origin of the scroll on palaeographic grounds where Ginsburg was so reticent, though it is less difficult to date the scroll by the script.

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The scroll is seventy-two feet long and on average twenty-four inches high, though shrinkage of the parchment has reduced the vertical dimension between the seams by about half an inch. When rolled on both sides to the midpoint, the scroll is about six and a half inches in diameter. These dimensions fit, with tolerable accuracy, the ritual prescription that "Half the length (i.e. the vertical height) shall equal the width of the scroll" (when rolled up).<sup>19</sup> The height of twenty-four inches is equal to the traditional "six handbreadths" of the height of the Mosaic stone tablets,<sup>20</sup> though these dimensions were not so commonly maintained in the Middle Ages as they are today, perhaps because of difficulties of obtaining skins of suitable size.<sup>21</sup>

The scroll is written on the flesh side of the type of parchment known as *Kelaf* (i.e. the outer sheet of a split skin), conforming to the Talmudic ruling that on *Kelaf* 

- <sup>16</sup> P. Kahle, The Cairo Geniza, 2nd ed. (Oxford, 1959), p. 118.
- <sup>17</sup> See N. H. Snaith, "The Ben Asher Text", Textus, II, 9.
- 18 Kahle, op. cit., p. 137.
- <sup>19</sup> Sopherim 2:9 and the notes thereto, Vol. I, p. 220.

<sup>20</sup> Cf. "Scroll of the Law", in *The Jewish Encyclopaedia* (New York and London, 1909), and *Baba Bathra* 14a.

<sup>21</sup> Cf. the various discussions in Margoliouth, op. cit.

<sup>14</sup> Cf. Margoliouth, op. cit., on MS. Harley 5720, p. 90b.

<sup>&</sup>lt;sup>15</sup> Op. cit., pp. 127-8 for comparative scripts.

only the flesh side may be written on.<sup>22</sup> Surprisingly, a portion of hair is left adhering to the outer side of one sheet though the rest has been carefully scraped. There seems to be no weakness in the parchment which could account for the patch being left and it may well have been left to indicate that the scroll has been ritually prepared, though no such custom seems to be known.

The overall length of the scroll has been produced by stitching together fifty-one sheets of parchment, the sheets varying in length from seventeen inches to twentyeight inches and each sheet carrying three columns of writing, with the exception of the first, which has four columns, the thirty-fourth and thirty-fifth, which have four columns, and the fifty-first sheet, which has one column. Various ritual prescriptions apply to this arrangement in columns and there is no certainty as to which of these prescriptions took precedence over the others at the period when the scroll is alleged to have been written. However, there seems to be conformity with Talmudic ruling in the main. The relevant prescriptions are that there may not be less than three columns to a sheet<sup>23</sup> and that there may not be more than eight, with the exception of the last sheet, which could, if necessary, contain but a single column:<sup>24</sup> that a column should not be less than a handbreadth in width<sup>25</sup> (generally interpreted to mean four inches) in a small scroll or sheet (for example see the narrowest column on the narrowest sheet in the scroll, i.e. the third column on sheet thirty-eight, which is a little over four inches wide): and that the column should not be wider than can be recognizable at one glance.<sup>26</sup> The latter two rules were more closely defined by Maimonides (died c. 1208) so that the minimum width was to be no less than the space of thirty letters, i.e. the space occupied in writing *lmsphwtvkm* three times, and the maximum width was to be " not much more than this ",27 presumably to obtain columns of reasonably standard width as in modern scrolls, though Maimonides gives as the reason the prevention of loss of place in reading.<sup>28</sup> It is not certain when the Maimonidean standard began to be observed and failure to conform to it cannot be used for dating : the best that can be said is that the Fisher scroll seems to follow the more latitudinarian Talmudic prescript, and on sheet thirty-eight a column of fifty letters is to be found, two-thirds more than the required minimum. The height of the letters ranges from 4.5 to 9 mm. (including the upper stroke of the *lamed*), somewhat smaller than later medieval writing, but, as Birnbaum has pointed out, so much variety in writing size was known that chronological conclusions may not be drawn from this.29

<sup>22</sup> Sopherim 1: 4.
<sup>23</sup> Ibid., 2: 6.
<sup>24</sup> Ibid., 2: 5.
<sup>25</sup> Ibid., 2: 8.
<sup>26</sup> Ibid., 2: 8.

<sup>27</sup> Maimonides, *Hilkhot Sepher Torah* 7: 4 (hereafter HST). All references are to the edition of R. Joseph Mayya, *Mishnah Torah* (or *Hayad Hahazaqa*) (1810). Birnbaum, op. cit., p. 124 cites the minimum as 27 letters per line.

<sup>28</sup> Ibid., 7: 4.

<sup>29</sup> Op. cit., p. 124. Cf. also Haggahot Maimonioth 2 to HST 7: 5 where the customary small size of Hebrew script is mentioned.

The books of the Pentateuch are separated by the requisite space of four lines,<sup>30</sup> the lines being carefully scored with some sharp implement and squared off on the page as was mandatory for liturgical scrolls.<sup>31</sup>

It is not certain whether the margins allowed above, below and between the columns are ritually permissible since on inspection they seem rather small. The Talmudic prescriptions in regard to the margins are that the lower margin shall be one handbreadth in width and that the upper margin shall be three finger breadths, in scrolls to be used for lections, and three finger breadths and two finger breadths respectively, for scrolls to be used in study.<sup>32</sup> The margin between columns is to be two finger breadths.<sup>33</sup> Maimonides varies the proportions slightly by indicating all measurements in finger breadths alone, though it is clear from his calculations that four finger breadths go to make one handbreadth.<sup>34</sup> The interpretation of what is to be a finger breadth must vary somewhat from scribe to scribe unless an equivalent measure is laid down, as in the Maimonidean calculation that it is to be about an inch:<sup>35</sup> this necessitates upper, lower and medial margins respectively, of about 3", 4" and 2". The margins on the Fisher Library scroll are 2" on average for the upper,  $2\frac{1}{2}$ " on average for the lower, and I" for the medial. Measured in accordance with the Maimonidean statement, across the base of the fingers,<sup>36</sup> my own finger proportions are too wide to fit the margins of the Fisher Library scroll by 3/10th", 3/5th" and 3/20th" respectively, using the literal statement of finger breadths. However, a Yemeni or "Oriental" hand may well be smaller and, hence, could fit the margins with literal exactitude. Modern scrolls, of which many are available locally for comparison, tend to use the Maimonidean *calculation* as a basis for margins rather than the literal "finger breadths" as evidenced by their standard margin sizes. When the change from the literal statement to the calculated standard took place is unknown and hence the apparent conformity with the literal statement in the Fisher Library scroll cannot be used for chronological determination: the Margoliouth catalogue<sup>37</sup> does not state margin widths and, hence, at the time of writing no comparisons can be made with the catalogued scrolls.

Although the Talmud lays down the ideal number of lines per column as fortytwo, sixty, seventy-two and ninety-eight,<sup>38</sup> *Kelaf* parchment scrolls are exempt from such limits.<sup>39</sup> The Fisher Library scroll has fifty-nine lines per column with the exception of the last three sheets, which have fifty-seven lines per column. Presumably the variation over the last sheets is to meet the rule that the song, *Ha'azimu* 

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<sup>30</sup> Sopherim, 2:4.
<sup>31</sup> Cf. Haggahot Maimonioth 15 to HST 7:15.
<sup>32</sup> Sopherim 2:4.
<sup>33</sup> Ibid.
<sup>34</sup> HST 9:1.
<sup>35</sup> Cf. The Jewish Encyclopaedia, op. cit.
<sup>36</sup> HST 9:1.
<sup>37</sup> See n. 2.
<sup>38</sup> Sopherim 2:6.
<sup>39</sup> Ibid.
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(Deut. 32: 1-43) should be set down in a specified number of lines<sup>40</sup> and that the last column of the Torah should finish with the closing words of the Pentateuch Le'ene Kol Yisrael (In the sight of all Israel) forming half a line of their own, the last letter reaching the mid point of the line.<sup>41</sup> This scroll meets these Talmudic specifications.

The arrangement of the Song of Moses (Exodus 15: 1-18) is set down in conformity with the rule that there should be thirty lines<sup>42</sup> arranged in the form of "a half brick over a whole brick and a whole brick over a half brick ",43 within which description there are varying traditions.<sup>44</sup> In this scroll the first line is unbroken, one of the traditions known, and the last line of the Song does not begin with  $m\bar{e}$ , as in the Talmud, or with eth, as Maimonides, but with the known and acceptable variant, hayam.45

When preparing a scroll for liturgical use some scribes are careful to start each column with the letter waw, a practice regarded by the author of Haggahot Maimonioth as that of "ignoramuses",<sup>46</sup> whilst other scribes arrange their work, as in this scroll, so that the six letters of the mnemonic Byh smw (By his name Yah) fall as the first letters of various columns throughout the scroll. These letters are the initial letters of the words bere'sith (Gen. 1: 1), Yehudah (Gen. 49: 8), haba'im (Ex. 14: 28), semor (Ex. 34:11), mah (Num. 24:5), and we'a'idah (Deut. 31:28),47 though in some scrolls different words are used, probably because the scribe was unable to arrange the text so that the "correct" word fell at the beginning of the column. The Fisher Library scroll is carefully written so that these words fall in the required places: when necessary the script in the columns is elongated, much as a printer spaces words on a page, to produce the required effect. Thus in column one of sheet twelve (= column 35 of the scroll), the script is dilated so that the word Yehudah becomes the first word of the following column. In a similar fashion the script in column three of sheet twenty-one (= column 64 of the scroll) is dilated so that *semor* falls as the first word of the next column. The origin and date of this mnemonic practice is unknown and hence it cannot be used for chronological purposes. The author of Haggahot Maimonioth claims to have been unable to find any reference to the practice in antecedent literature though it seems to have been well established in his day,  $^{48}$  (c. end of the thirteenth century A.D.).

A further sign of the careful writing of the text is the observance of the Talmudic prescript<sup>49</sup> that the first of the two words Drs Drs in Levit. 10: 16 should end one line, and that the second of these two words should begin the next line.

<sup>40</sup> *Ibid.*, 12:9. The accepted tradition is 70+2 blank lines, but on variations in the tradition. in particular the Maimonidean ruling, see below. 41 Menahot 39a.

48 Ibid., 12: 10.

44 See Cohen, op. cit., vol. I, p. 215, n. 45.

<sup>45</sup> *Ibid.*, p. 268, n. 162.

<sup>46</sup> Haggahot Maimonioth 7 to HST 7: 8.
<sup>47</sup> Ibid. Cf. also the article "Scroll of the Law "in The Jewish Encyclopaedia.

<sup>48</sup> Ibid., 9 to HST 7: 10.

<sup>42</sup> Sopherim 12: 10, 11; and 1: 10.

<sup>49</sup> Sopherim 9: 2.

Scrolls for liturgical use are not allowed to present in the text or margins any extraneous marks, signs or additional matter, with the exception of the Puncta Extraordinaria, the writing of an inverted Nun before and after Num. 10: 35-36. the enlargement of some letters and the use of Taggin (the zayin-shaped tittles or crownlets) on some letters. Though Birnbaum<sup>50</sup> has found some unusual markings on a sheet of a scroll which he states was designed for "synagogue" use there must be some doubt as to whether the scroll from which the sheet comes was so used or whether it was a study scroll. If the statements of Rabbinic authorities are to be believed the rules of limitation as to what appeared in a Torah scroll were so strictly applied that a scroll with markings such as those described by Birnbaum would have been declared *pasul* (ritually unfit) and would have had to be put in a Genizah, or the sheet would have had to be removed from the scroll and replaced. Whether or not Rabbinic stringency seen in later years was applicable also in the eighth century A.D.. whence Birnbaum's sheet dates, is a matter for further research if and when more material becomes available. Certainly no extraneous signs are to be found in the Fisher Library scroll. The Puncta Extraordinaria appear in the ten places specified in the Talmudic prescript.<sup>51</sup> this being a reasonable indication of the care with which the scroll was written. A comparison with the data in Margoliouth's catalogue<sup>52</sup> indicates that it was not always possible for a scribe to regulate the appearance in the prescribed manner of the words Drs Drs, and, with some frequency in the catalogued scrolls, the *Puncta Extraordinaria* are omitted from one or other of the prescribed places. The inverted nuns in the Fisher Library scroll are found as stipulated (on sheet 35  $column \ z = column \ rot 6$  of the scroll) but the majuscular and minuscular letters vary somewhat from the Talmudic tradition. This variation, except in one instance, is a matter of no surprise since there seem to have developed a variety of traditions as to which letters should be enlarged, the variations apparently depending either on schools of scribes or on locality or on both. Hitherto the various traditions do not seem to have been examined and analysed in sufficient detail to provide useful criteria for indicating date or provenance,<sup>53</sup> but it is quite clear from scrolls of Ashkenazi origin that so far back as can be traced many more majuscular letters appear in the text than are regulated by Talmudic ordinance or than appear in scrolls of Sephardi and Yemeni origin.<sup>54</sup> Even within Yemeni and Sephardi scrolls traditions differ<sup>55</sup> and it may well be that scribal families maintained their own systems inside local groupings.

<sup>50</sup> Op. cit., p. 123.

<sup>51</sup> Sopherim 6: 3 (Gen. 16: 5, 18: 9, 19: 33, 33: 4, 37: 12, Num. 3: 39, 9: 10, 21: 30, 29: 15, Deut. 29: 28).

<sup>52</sup> See n. 2.

<sup>53</sup> C. D. Ginsburg presents some lists of majuscular and minuscular letters in his *The Massorah* (London, 1880-1897), Vol. I, pp. 35-6, but these were not prepared with sufficient critical care to be of value in dating.

<sup>54</sup> Margoliouth, op. cit., pp. 3 and 5. The phenomena described in this catalogue are to be seen in modern Torah scrolls.

<sup>55</sup> Ibid., cf. nos. 1, 2, 3 and 9, 10.

The majuscule and minuscule letters in the Fisher Library scroll are not always easy to distinguish since the writing is uneven in places, but it is clear that, contrary to *Sopherim* 9: 2, the *beth* of *beres'ith* (Gen. 1: 1) is not enlarged and in this detail differs from every scroll listed in Margoliouth's catalogue (except those lacking the opening verses of Genesis) and from every other scroll examined in local synagogues.

The majuscule letters are zayin in hkhznh (Gen. 34: 31), nun in nsr (Ex. 34: 7), resh in 'hr (Ex. 34: 14), waw in ghwn (Lev. 11: 42), gimel in whthglh (Lev. 13: 33), nun in msptn (Num. 27: 5),  $p\bar{e}$  in lipnw (Num. 32: 16),  $h\bar{e}$  in hhlwt (Deut. 3: 23), 'ayin in sm' (Deut. 6: 4) and daled in 'hd (Deut. 6: 4), lamed in bgwl' (Deut. 21: 17),  $h\bar{e}$  in hlyhwh (Deut. 32: 4), this letter also being written by itself.

The minuscule letters are the  $h\bar{e}$  in *bhbr'm* (Gen. 2:4), Kaf in wlbkhth (Gen. 23: 2), quf in qsty (Gen. 27: 43), 'aleph in wyqr' (Lev. 1: 1), mem in mwqdh (Lev. 6: 2) and yad in tsy (Deut. 32: 18).

The waw of slum (Num. 25: 12) appears to be broken but the parchment is too rubbed to be certain: there is certainly no closed quf in Ex. 32: 25.

In the number and occurrence of these letters the scroll is similar to, though not identical with, the Harley 7619 scroll of fourteenth-century Sephardi origin and they may represent a similar tradition. (The similarity may be closer than appears at first sight since there seems to be an omission in Margoliouth's description of the majuscule letters in the Harley 7619 scroll.)<sup>56</sup> In any case, the scroll seems to present a genuine *Sopheric* tradition in respect of these letters.

The care with which the scroll was written, the conformity of its text, materials and arrangement on the sheets to Talmudic regulation and Sopheric traditions, even though these traditions are difficult to date, would seem to indicate that the scroll was written for use in a synagogue for liturgical purposes. Yet appearance is not proof, for, if the scroll were written with the deliberate intention of passing it off as an old Torah it could well have been written, tedious and time-consuming as this would have been, with just the degree of care and precision found therein. It is necessary, therefore, to complement our knowledge of its conformity to ritual standards with a knowledge of how long the scroll has been extant before any answer can be given to the question of authentic usage. The simplest solution to the problem would be to know the date or, more generally, the period when the scroll was written; but we must rely on the style of the script and the appearance of the scroll in making chronological judgements and it is possible to fake appearances. Hence conclusions reached on these grounds are of uncertain value unless it can be shown, beyond reasonable doubt, that the data of reference have not been artificially produced. Alternatively, the author of the scroll must be identified or, in lieu, it must be demonstrated that the scroll had been in use in a synagogue over a period of time. If either of these latter alternatives can be shown then the date indicated by the script may be

<sup>&</sup>lt;sup>56</sup> Compare what is said *ibid.*, p. 1 with p. 3 (Add. 4707). There seems to be an assumption that a majuscule *nun* (Num. 27: 5) is also to be found in Harley 7619 though it is not mentioned explicitly.

accepted as a matter of intrinsic interest but not of critical necessity to the question of authenticity.

The first of these alternatives may be dismissed immediately for the lack of any indication as to authorship on the scroll itself and the vague traditions as to the origin of the scroll preclude us from guessing at any author unless it were Shapira himself. With Torah scrolls, unless the precise history of the scroll is known, the name of the scribe is always unknown.

The second alternative may be allowed, though the evidence is not indisputable. For all the reverence in which they are held Torah scrolls seldom have a long life, often little more than two hundred years. The very bulk of the scrolls precludes delicate handling and in the course of time they may become torn. Repairs are permitted to tearing along the junctions of the sections to a maximum of three times<sup>57</sup> but if torn or worn elsewhere small patches may be applied.<sup>58</sup> The Fisher Library scroll has been carefully patched in a number of places as though regular use had caused wearing, though the patches could have been applied in the process of "manufacture" if the scroll is of recent age.

Amongst other causes of deterioration are linear wear caused by the movement of the *Yad* (the reader's pointer) over the text and the rubbing of the worshipper's *talith* (prayer shawl) at the beginning and end of the divisions in the lections, both of which are minimally abrasive acts but could over a long period of use damage the surface of the scroll. Another major cause of deterioration is the blackening of parchment which makes the text illegible, a blackening brought about by regular exposure to the atmosphere,<sup>59</sup> probably through chemical changes in the parchment.<sup>60</sup>

It would be expected that if a scroll were used only for the regular lections on the Sabbath, Mondays and Thursdays, the whole body of parchment would deteriorate at an even rate, as the scroll is exposed sheet by sheet but once in the course of the year as the cycle of lections is completed, and each sheet has approximately the same exposure period to the chemical elements in the atmosphere which cause blackening. Only in wealthier communities, however, would it be expected that a scroll receives such minimal use, for such communities own several scrolls and special festival readings are taken from scrolls marked by some ornament as being set aside for this purpose. In poorer communities where only one or two scrolls are owned some columns must be more exposed than others since festival lections are read from them in addition to the weekly portions : if exposure to the atmosphere is a cause of deterioration then one would expect "selective " deterioration from the effect of years of reading more frequently from some columns. This type of selective blackening of parchment sheets is found in the Fisher Library scroll. Thus in the " book "

<sup>58</sup> Ibid., 2: 11.

<sup>59</sup> The Jewish Encyclopaedia, article on Bible MSS.

<sup>60</sup> See C. A. Mitchell and C. Hepworth, Inks, their Composition and Manufacture (London, 1916).

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<sup>57</sup> Sopherim 5:14.

of Genesis the parchment is relatively unmarked (with the exception of some erasures) except for those sections which are read more frequently than others. Thus the section containing Genesis 21, which is read on New Year (sheet 4), is blackened substantially as is sheet 5 which contains Genesis 22, read on the second day of New Year. Sheets 16, 17 and 28, all of which contain portions read during festivals, are also darker than the remainder. The most heavily blackened sections in the whole scroll occur on sheets thirty-nine and forty which contain Numbers 28-29, selections from which are read on most Festival days as the "second scroll" portion. As apparent confirmation that exposure has caused this selective blackening a fairly clear, though not sharp, demarcation line between the dark and light portions shows towards the left-hand edge of column 2 of sheet 39 (= column 119 of the whole scroll) where the right-hand rolled section would normally rest when a portion was being read if the injunction that no more than three columns be unrolled at any one time<sup>61</sup> was being observed. It should be noted that if the scroll were in use for two or even three centuries the rolled portion would rest in that position at least three thousand times.

This selective darkening does not account for all the discoloration on the scroll : there is at least one sheet (14) where there is extensive discoloration and the incised lines and the grain of the parchment show clearly. However, only the first column and a half of the sheet are so affected, the discoloration seemingly being related to the extraordinarily dark colour of the ink in that column and a half. Where the ink resumes its normal colour the blackening on the surrounding parchment stops. It may well be that the parchment has been attacked chemically by a new batch of ink used by the scribe (see below). Moreover, on most sheets there are a number of darker patches at first sight quite haphazard in distribution. However, on closer examination, most of these patches, but not all of them, correspond approximately with those places in the weekly portions where the reader pauses and another worshipper is called up to the reading. Whilst the area of darkening is not always precisely on the place of pausing, i.e. the spot which technically should be touched by the *Talith*, it is seldom remote from that spot by more than two inches. The proximity of most of these darkened areas and the places of pausing may not be fortuitous at all but could be caused by the rubbing of *Talethim* over a long period of use.

Whilst it would not necessarily be impossible to reproduce this selective aging artificially it would seem to need a substantial degree of skill, and hence it would seem likely that the scroll was actually used in a synagogue, perhaps in a poor community, over a period of years. However, in view of the ambiguity of the evidence a number of general observations must here be offered which would support this argument.

On comparison with the parchment of scrolls in local synagogues the parchment of the Fisher Library scroll would seem to be very much older : this is only a general indication which is limited in value by the fact that none of the local scrolls is known

<sup>61</sup> Sopherim 3: 10.

to be older than two hundred years. The best way of giving a certain indication of the date of the parchment would be a carbon 14 test, but such a test would destroy at least six grams of the material, something like the size of a quarto sheet, and a portion of the text would have to be destroyed. In any case whilst this test would date the parchment it would not test the age of the writing thereon which could be of a later date. However, it is doubtful whether there is a substantial discrepancy between the age of the parchment and the age of the writing thereon. Old parchments of sufficient length to forge a scroll of this size are not readily available : for the scroll of the "Moabite" Deuteronomy which Shapira tried to sell to the British Museum the forger (if the scroll was really a forgery as most scholars maintain even after the discovery of the Dead Sea Scrolls) seems to have been obliged to cut away the blank lower edge of a Torah scroll $^{62}$  to obtain his material. It is also improbable that this is a palimpsest from a younger Torah scroll rewritten in a more ancient script. Modern scribes use an ink made of gall-nuts, gum Arabic, vitriol (ferrous sulphate) and water, a type of ink which seems to have been traditionally used for some centuries.<sup>63</sup> This iron-gall ink, if carefully prepared to prevent total oxidation, penetrates the fibres of parchment and is not easily removed though it will eventually fade to a rust-brown colour from chemical changes through contact with the air.<sup>64</sup> In any case on parchment the iron content of ink tends to make the ink irremovable. except by mechanical methods.<sup>65</sup> There is no sign on the scroll of any erasure by chemical means which would, most probably, have produced a yellowing of the surface detectable by photography<sup>66</sup> and which, in any case, would have left some traces of the previous script. There are many signs of erasure by mechanical means, some of which are not easily visible to the naked eye but show up clearly on photographs, the abrasive instrument apparently having sufficiently roughened the surface to change its reflecting qualities. However, these erasures are restricted to single words or, at most, to six lines of text in any one column, and it can be said categorically that they are associated with corrections in the text.

It should also be noted that the fading of the ink on the sheets is not uniform, some words and whole phrases appearing quite black, others reddish in colour. More important, there are changes in colour inside individual letters where one part of a stroke is lighter than the remainder, not in abrupt change (which could be simulated) but in a steady transition from the lightest to the darkest portions, a shading which is probably impossible to reproduce artificially in normal calligraphy. This would strengthen the belief that the scroll is not a forgery but is of some age, having been in use in a synagogue.

62 Allegro, op. cit., pp. 38-9.

<sup>63</sup> According to a local scribe trained at Jews' College, London. The inclusion of vitriol would seem to be counter to the explicit prohibition of its use in Sopherim 1: 5 and Sepher Torah 1: 5.

<sup>64</sup> See Mitchell and Hepworth, op. cit., pp. 84-5.

<sup>65</sup> Ibid., p. 131. This may well be why Rab. Meir, a second-century *Tanna*, forbade the use of metallic-based inks on scrolls since the surface of the parchment had to be defaced in erasing errors.

66 Ibid., p. 141.

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Without chemical analysis it is impossible to be certain that the ink is an irongall type but the mechanical erasures and the heavy fading would seem to indicate that this was its nature. Carbon-based, gum-bound inks of the type described in the Talmud<sup>67</sup> are removable by water and a sponge was used in the ancient world for erasing writing in such ink.<sup>68</sup> It is not known when carbon inks were replaced by iron-gall inks for the writing of Torah scrolls : though G. R. Driver claims, without substantiation, that carbon inks were used until the "Middle Ages",<sup>69</sup> the vagueness of this term and the lack of evidence<sup>70</sup> prevent the nature of the ink being used in chronological discussion.

One further item of general evidence must be adduced in support of the belief that this scroll had seen long service in a synagogue. Gaster has observed<sup>71</sup> that in poor communities the chances of an ancient scroll surviving are better than in wealthier communities, for when a scroll was *pasul* it was patched up rather than being put aside for burial since the community could not afford new scrolls. Not only is the Fisher Library scroll patched, as described above, but sections have also been rewritten in an unusual, but ritually permissible,<sup>72</sup> manner as though the owners of the scroll could afford to do no other but preserve it carefully. In columns one, two and three of sheet twenty-nine (= columns 86-88 of the scroll) the writing is more faded than elsewhere in the scroll except where certain letters are very black and untidy in shape: some of the letters have lost all colouring on the thick parts of the script, only the outlines being left. The black letters have a blurred outline as though they have been retraced, the scribe not having as steady a hand as the original writer. It seems as if the script in these columns has faded, perhaps because of a faulty batch of ink, and the scroll, having become *pasul*, was restored by retracing the faded That this was the sequence of events is made almost certain by the following letters. details: the letter quph in hqdsym, which differs in shape from the letter quph normally found in the scroll (the original vertical stroke of the letter can be seen to the left of the later stroke); the letter *lamed* in l' where part of the faded *lamed* has not been covered by the superimposed letter; the *taph* of *msmrty* where the foot of the taph has been turned to the left in restoration but was turned to the right in the original letter. Naturally, since an attempt has been made to restore the earlier script, the later writing is alike, but in the restoration the scribe has habitually added an oblique stroke to the top of the lamed, the like of which is not found elsewhere in the scroll. (The loss of colour on some letters may be the result of over-acidity in the ink used for restoring the text reacting with the original ink.)

When this evidence is seen in conjunction with the fact that the scroll is in at least three hands the likelihood of forgery recedes. It needs no great skill in palaeo-

67 Shabbat 23a.

68 See Mitchell and Hepworth, op. cit., Chapter 1.

69 G. R. Driver, The Judean Scrolls (London, 1965), p. 408.

<sup>70</sup> The ink type on the sheet described by Birnbaum, *op. cit.*, is not given but would seem, from his brief references to its blackness, to be carbon-based (p. 123).

<sup>71</sup> Op. cit., p. 46.

72 Sopherim 3: 8.

graphy to see that the script of the final column, which is also written on a different type of parchment, is quite different from anything preceding, the shapes of the letters differing in almost every detail. It is less easy to detect other hands so as to be certain of the precise number of scribes involved in writing the scroll, for variations in the script may be more apparent than real, depending not only on the skill of the scribe but also on the nature of the implements employed and the probability of chemical and liquid variations in different batches of home-made ink as well as the quality of the parchment. Moreover, the obvious, i.e. variations in the tittling on letters, may not be signs of different hands. In the first column of the scroll, for example, tittling appears on the letters yud, beth and 'aleph, whereas, elsewhere in the scroll, tittles are found only on 'ayin, sade, nun, sin, zayin and gimel in passages written by the same scribe: the variation is probably the result of following some tradition such as that described by Menahem Meiri.<sup>73</sup> Again, the same scribe adds tittles to about half way down column five of the scroll but the remainder of the column and subsequent columns as far as the eighth are without any tittling whatsoever. Nevertheless, a third hand can be detected in the person of the corrector who has left his mark throughout the scroll. Major erasures of up to six lines are found,<sup>74</sup> e.g. in columns 68, 75, 96, but these all seem to be rewritten as corrections in the original hand, so far as can be determined within the limits of calligraphic variation caused by the roughened surface. However, where the scribe has omitted single words and there has been room for these to be inserted without erasure, a third hand can be seen without doubt. Thus in column 7 (Gen. 11: 10-32), where a series of closed sections is marked by breaks in the text of a standard length (I I/5th"), one of these breaks is smaller than the others. A third hand has inserted there the word *wbnwth* which should have ended the sentence but was omitted. A similar circumstance is found in column 136 where a closed section differs from any other closed section in the scroll. Instead of the last line of the section ending short of the margin the writing is taken to the end of the line, i.e. to the column edge, as in an open section. A third hand has inserted the omitted word d'tm. That the section was originally intended to be a closed and not an open section is certain from the indenting of the following line. This same hand seems to have been the source of a number of the other corrections throughout the scroll, but these particular examples would almost certainly indicate the work of a corrector some time after the scroll was written.75

All the foregoing evidence would support the belief that the scroll was used in a synagogue and is, therefore, authentic.

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There remains to be considered the question of the age of the scroll, consideration being based, in the main, on calligraphy. There seem to be good palaeographic

<sup>&</sup>lt;sup>78</sup> See Gaster, op. cit., for a verbatim quotation of Meiri's account of the tittling.

<sup>&</sup>lt;sup>74</sup> Despite the limit placed on erasures to the extent of two consecutive lines in Sopherim 5: 8.

<sup>&</sup>lt;sup>75</sup> According to Maimonides HST 7: 4, the correcting had to be done within thirty days.

grounds for agreeing with Ginsburg's dating to within a period of one hundred years, that is between A.D. 1200-A.D. 1300 with the probability of the scroll belonging to the early part of this period. Though a steady line of evolution in script cannot always be claimed since the text used as a model may influence *sopheric* style, in general, development in Hebrew style is traceable.<sup>76</sup> It seems fair, also, to assume that the style of writing found in codices would not vary from the style of writing on scrolls in the period before the printed book, though, as Birnbaum suggests, such an assumption would not be justified in recent centuries.<sup>77</sup> It would be tedious to document each text considered for comparing palaeographic style : suffice it to say that, perforce, all were facsimiles, the largest number being drawn from the collection in Kahle's *Massoreten Des Westens*, the remainder being culled from plates in catalogues, journals and the large number of microfilm copies of MSS. in the British Museum on loan to the Department of Semitic Studies at the University of Sydney from the W. H. and Elizabeth M. Deane collection of Fisher Library. Only those letters are discussed here which present the most easily recognized developments.

In "Oriental" calligraphy from the tenth century A.D. onwards the lamed presents certain characteristic features, namely, an acute-angled apex hook, thin and clear, a vertical or slightly angled stroke reaching the central, horizontal bar at a sharp angle and a thin tail without any adornment at the lower extremity. The developments which take place are the loss of definition on the apex hook which becomes a solid triangle of ink c. the twelfth century, then the reduction of the triangle to a shapeless blob of colour but still facing to the left and, at the same time, the reduction of the angle at the shoulder to a curve c, the thirteenth century A.D. By the fourteenth century A.D. the simple, thin tail begins to develop a thickening at the extremity so that the lower part of the lamed looks more like that known to us in printed texts. In the Fisher Library scroll the lamed has lost the acute-angled stroke and even the solid triangle effect. A shapeless blob to the left forms the apex but the bulging lower extremity does not appear except in the last column, which is in a different hand, and in the restored passages in columns 86-88. The lamed, then, gives the impression of a thirteenth-century hand with the restoration at least a century later.

Mem shows the following developments. In the tenth century the salient features are a single pronounced horn on the upper left of the curving left-hand stroke. There is a curved apex to the right where the left-hand stroke meets the right stroke which is offset from the vertical, the junction of the strokes being thickened. The characteristic break in the "frame" of the *mem* is at the left and is wide. In the eleventh and twelfth centuries A.D. the gap gradually closes and is moved so that it is not to the left but at the base of the *mem*, for the curved left stroke is lengthened to the depth of the base stroke. The pronounced horn is reduced in the thirteenth century and the apex is moved towards the left and is steadily thickened so that by

<sup>&</sup>lt;sup>76</sup> See Birnbaum, *op. cit.*, p. 125.

<sup>77</sup> Ibid., n. 4.

the fourteenth century A.D. the apex forms a horn of equivalent size to that on the left, and both are joined with a V-shaped break at the top of the junction. In the Fisher Library scroll the *mem* shows the development of the apex towards a horn but is still substantially rounded and has not yet joined the horn on the left : it seems, therefore, to represent a thirteenth-century hand.

The form of the letter quph is consistent with this dating. In the tenth century the letter quph is formed from a bow-shaped right stroke, the upper portion being horizontal, the lower portion curving through  $300^{\circ}$ . A vertical stroke projects through the end of the bottom of the curved stroke to meet its horizontal upper portion. In the eleventh century A.D. the connection with the lower curve is broken though the vertical stroke remains attached at the top. In the twelfth century A.D. the vertical stroke loses all connection with the bow-shaped right portion, but characteristic of the twelfth century is inconsistency within individual MSS., both attached and detached forms being found in juxtaposition. In the thirteenth century A.D. the vertical stroke is consistently detached as in the Fisher Library scroll.

The 'aleph also falls into this dating pattern. The tenth-century 'aleph presents the following characteristics. The central bar which unites the left and right strokes is heavily curved at the top, the left-hand stroke joining this central bar near this sharp turn and the foot of the left-hand stroke being turned to the right. The righthand stroke meets the central bar a little below the central point. In the eleventh and twelfth centuries A.D. the left stroke moves steadily down the central bar from the upper curve and the central bar straightens out a little. In the twelfth century the right-hand stroke moves down the central bar and the junction between them falls at the foot of the bar. In the thirteenth century the bar is straight, the righthand stroke moves back up the bar towards the mid point and the movement of the left-hand stroke is arrested. In the fourteenth century the curve at the foot of the left stroke is thickened, the thickening appearing to reverse its direction so that it faces to the left rather than to the right whilst the bar is tittilated so that the apex has a slight hook to the right and the base has a slight hook to the left as in the printed character. In the scroll the 'aleph falls somewhere between the straightening of the central bar and the reversal of the direction of the foot of the left-hand stroke, i.e. the thirteenth century A.D. The 'aleph in the last column varies in shape but the central bar is tittilated and the foot clearly turned on the left stroke, thus indicating a date for this column in the fourteenth century or later.

The similarity of a number of the letters in the Hebrew script seems to have caused confusion as evidenced by the experiments in the MSS. aimed at developing means of differentiating between them. In the earliest levels available to me the  $h\bar{e}$  and *chet* were almost indistinguishable, the left stroke being attached to the upper horizontal in both letters. Differentiation was achieved by extending to the left the horizontal stroke of the  $h\bar{e}$  above the left vertical or by a *tag* on the right stroke of the  $h\bar{e}$ . Developments of the distinction between these letters were, first, the detaching of the left stroke of the  $h\bar{e}$  from the horizontal and, eventually, the reduction of the

detached stroke to the shape of a minute parallelogram. In this final development, if the scribe erred and joined the horizontal and the vertical strokes, the difference between  $h\bar{e}$  and *chet* could still be detected by the differing shapes of the left strokes. In the Fisher scroll the left stroke of the  $h\bar{e}$  is generally detached but has not yet developed an independent shape and where the gap in the  $h\bar{e}$  has been closed by the scribe the difference between  $h\bar{e}$  and *chet* is lost.<sup>78</sup>

Daled and resh, which also seem to have provoked regular experimentation in the search for a clear means of differentiating between them, seem to have caused the scribe of the Fisher Library scroll some trouble. At the best of times differentiation between the two is minimal in this scroll and the *daled* takes several forms on each sheet, the scribe sometimes varying the length of the horizontal of the *daled* and at other times thickening the vertical stroke thereof. These experiments were not successful and confusion is possible; thus in Numbers I : I-I2 where reliance has been placed on thickening the upper portion of the vertical stroke of the *daled* for differentiation from *resh* there is so little (or even no) difference that one must judge between them by context. In Gen. I0 : I7, however, a mistake may well have been made and missed the eye of the corrector for h'dqi is clearly written instead of h'arqi. Since by the fourteenth century differentiation between all these letters was reasonably standard and common the scroll must have been written in some preceding period.

The dilated letters present ambiguous evidence as to dating. These letters were used by the scribes not only to equalize the lines so that reasonably straight margins could be achieved but also to space out the text for the sake of the mnemonic Byh smw as noted above. The practice of dilating letters first appeared in the sixth or seventh century but was sparingly used.<sup>79</sup> Even in the tenth and eleventh centuries, in codices at least, the device was avoided if possible, spacing being achieved by dummy signs at the ends of lines;<sup>80</sup> and dilation of letters did not seem to be widely employed until the thirteenth century A.D.,<sup>81</sup> Ginsburg being sufficiently misled to regard the practice as unknown before that century.<sup>82</sup> By the fourteenth century the practice was common even in codices.<sup>83</sup> It is not certain when the modern custom (mentioned in Yoreh De'ah and the Shulkhan Arukh) of dilating only the letters 'aleph, hē, lamed, taph and final mem arose but in the earlier MSS. a greater variety of letters was dilated. In the Fisher Library scroll the letters chet, daled, quph, sin and beth are dilated in addition to the letters named above and this greater number of dilated letters may represent experimentation at the time when dilation became common. The regular use of the practice in the Fisher Library scroll would

<sup>78</sup> The "split circumflex" *chet* found in some synagogue scrolls (first mentioned by R. Ashi) might have been an early attempt to provide a clear distinction between the two letters.

<sup>79</sup> See Birnbaum, op. cit., p. 124.

<sup>80</sup> Cf. M. Goshen-Gottstein, "The Authenticity of the Aleppo Codex ", Textus, I (1960).

<sup>81</sup> Maimonides' reticence on the subject seems to have surprised later commentators. Cf. *ibid.*, and Haggahot Maimonioth to HST 7: 4.

<sup>82</sup> C. D. Ginsburg, Introduction to the Massoretico-Critical Edition of the Hebrew Bible (London, 1897), pp. 470, 485 etc.

88 Ibid., plate facing p. 625.

indicate that the scroll is probably not older than the period when the practice became common, i.e. the thirteenth century A.D., though the evidence is not firm.

The arrangement of the song, *Ha'azinu* (Deut. 32), may present further evidence for dating though this evidence, too, is ambiguous.

According to the Talmud<sup>84</sup> the song was written in seventy lines as in our scroll and a tradition developed that the song should begin on the eighth line of a column, preceded by a blank line and the last lines of Deuteronomy 32 arranged in six lines beginning with the words w'ydh, 'hry, hdrkh, b'hryth, lhkh'ysw, and qhl respectively,<sup>85</sup> also as found in the Fisher Library scroll. However, according to Goshen-Gottstein,<sup>86</sup> Maimonides specified that the song was to be written in sixty-seven lines (despite the evidence of the printed versions of Maimonides which seem to have harmonized the text with the seventy-line tradition) and Yemeni and Spanish sopherim began to follow the Maimonidean ruling. That the tradition of writing the song in sixty-seven lines applied to liturgical scrolls as well as to codices can be seen from the descriptions of Yemeni and Sephardi scrolls in the Margoliouth catalogue.<sup>87</sup> Maimonides also ruled that the section following Deuteronomy 32: 43, namely verses 44-47, should be written in five lines, a matter which caused some considerable surprise to commentators since the lines would be much too long. In discussion of this point Rabbi Meir ben Todros of Toledo is reputed to have said<sup>88</sup> that the lines following the song began with wybh', h'm, hdbhrym, lbhbhthem, 'sr, htwrh, in "all the old and exact scrolls ": this is the way in which these lines begin in the Fisher Library scroll except that two more lines follow, making eight in all before the open section, beginning with the words wbdbhr and 'th. It is, in fact, difficult to perceive how the lines following the song could begin with the specified words and still only be six in number yet finish at the section, unless the last line ran over two columns, which would be ritually impossible. Either Rabbi Meir ben Todros was misquoted in Ha-Meiri, the source of our knowledge of his work, or else Rabbi Meir did not enumerate all the lines in the paragraph.

It cannot be certain that *all* Yemenite scrolls were written to conform to the Maimonidean ruling as to sixty-seven lines in the song, but in that this scroll differs in other respects (as noted above) from Maimonidean rulings, following rather the Talmud, it may belong to a period too early for the Maimonidean influence to have been felt, perhaps in the first quarter of the thirteenth century.

The evidence would seem to indicate that the Fisher Library scroll is a genuine Torah scroll of considerable age that was used over a long period of time in synagogue worship. Its place of origin was probably the Yemen, whence it was brought by M. W. Shapira, who may have tried to pass it off as a scroll from St. Catherine's

<sup>84</sup> Sopherim 2: 9.
<sup>85</sup> Goshen-Gottstein, op. cit., p. 42.
<sup>86</sup> Ibid.
<sup>87</sup> Op. cit., pp. 5, 7, 8, 9.
<sup>88</sup> Quoted from Goshen-Gottstein.

Monastery. Sir Charles Nicholson may have offered it originally to the British Museum, but certainly seems to have sought expert advice on its authenticity and subsequently presented it to the University of Sydney. If our estimate of its age, which agrees with the age apparently ascribed to it by C. D. Ginsburg, is correct, namely the early part of the thirteenth century A.D., then it is, if not the oldest, one of the oldest complete extant Torah scrolls; but it must be emphasized that the date previously ascribed to it by the author of the anonymous display card in the Fisher Library is wide of the mark by at least two centuries.