SYSTEMS OF LIGHT GA’YOT IN MEDIEVAL BIBLICAL MANUSCRIPTS
AND THEIR IMPORTANCE FOR THE HISTORY OF THE TIBERIAN SYSTEMS
OF NOTATION*

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The sign of the ga’ya¹ is one of the most common signs in the printed Tiberian Bible text. Among the several classes of ga’yot, the light ga’ya is the most widespread and appears in

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¹ The ga’ya (also called meteg) is a small vertical stroke written either to the left or to the right of the vowel sign (ח or ח). There are several types of ga’yot. The most prominent are the so-called "light ga’ya" and "firm ga’ya"; the former occurs in an open syllable (e.g., רֶשֶׁב; קֶשֶׁב), whereas the latter occurs in a closed one (e.g., מְלֹאכָה; מֵלֹאכָה). Further details on the various kinds of light ga’ya will be given below (see pp.53;56ff.). I will deal with the firm ga’ya in a separate study. The first to differentiate between these two main classes of the ga’yot and to fix their terminology was the famous medieval naqdan, Yequetiel b. Yehuda, who lived in Ashkenaz at the beginning of the 13th century. His work (see below n. 42) was the basis of all subsequent descriptions until our era; see also pp. 77-78 below, and n. 43.
larger numbers than all the other classes together.\footnote{2}

In spite of their great frequency - or perhaps just for that reason - only slight progress was made in the study of the ga'yt, their exact function, the circumstances of their invention and the history of their transmission. A reluctance to deal with this tedious subject was already expressed by the 16th century Jewish scholar, Menachem di Lonzano:\footnote{3} "I am weary of my life through the abundance of the extra ga'yt which are useless, like those which the Ashkenazim put in their books and called meteg (bridle), while I have called them bridle to the ass. They are a nuisance to me. I am weary of bearing the burden of correcting them, for there are more of them than the locust, and they are innumerable."

These words may well serve to illustrate the minimal interest of scholars in the ga'yt not only in that author's generation, but also in later generations down to our days. Although in the last two centuries scholars occasionally took pains to examine this field of research, their work was of a limited and partial nature, describing mostly the practice of recording ga'yt in certain printed Bibles or in individual

\footnote{2} Every examination of the text of our printed Bible will prove this fact. \textit{E.g.}: In Joshua 1-2 of the Koren edition of the Bible, there are 93 words which have a light ga'ya as opposed to 8 words with a firm ga'ya and four words with other minor types of ga'ya. Although this proportion is not necessarily consistent, the preponderance of the light ga'ya is evident in any biblical book in this edition as well as in most other printed Bibles.

\footnote{3} M. di Lonzano, \textit{Or Torah} (Amsterdam, 1659) p. 2\textsuperscript{b}.

[2]
prestigious manuscripts. No effort was made to undertake an extensive comparative study of all the available evidence in order to gain an understanding of the practice of the ga'ya notation in the various Jewish centers from its invention up to the first printed Bibles. Only a comparison of mss from different localities and different times could have resulted in the formation of a comprehensive concept on this subject-matter and its history.

However, the lack of a thorough comparative study did not actually prevent scholars from formulating a general theory on the history of the ga'yot on speculative grounds, as will be seen below. This theory was commonly accepted, and until recently was not challenged.

The first concern of the present study will be to demonstrate how a comparative study may be employed in order to make progress in the study of this as well as of other issues in the realm of text transmission. The validity of the accepted theory will be reexamined in the light of additional material from the compared mss, and a comprehensive theory will be proposed.

A second purpose of the present study is to call attention to the importance of a neglected treasure of sources for the

textual history of the Bible - namely the late medieval biblical mss (of the 13th-15th centuries). Though forming the bulk of mss left from the Middle Ages, they did not attract scholarly interest. My investigations in various aspects of text transmission have shown that such an attitude is unjustified, and that holding on to it robs textual research of valuable information which cannot be obtained in any other way.

This statement demands further clarification. Biblical mss first became widely known to the scholarly world through the monumental works of Kennicott and de Rossi in the second half of the 18th century.\(^5\) However, paradoxically enough, instead of increasing the interest in medieval mss, those works diminished it. The reason for this was the disappointment of scholars with the minimal results of the efforts put into the collation of hundreds of mss. Although there appeared to be thousands of variants in many of those mss, they seemed to be worthless from the point of view of text-criticism. As a result, the assumption was firmly established that all those variants were nothing but scribal errors of the original authorized version, namely the Massoretic text.\(^6\)

The assessment of the medieval mss as being of no use in the critical investigation of the consonantal text, eventually


\(^6\) This commonly held assumption can be found in almost every relevant textual discussion, see, *inter alia*, F.M. Cross, "The History of the Biblical Text in the Light of Discoveries in the Judean Desert", *HTR* LVII (1964) 288.
affected also the scholarly opinion on their vocalization and accentuation. Without any attempt to examine the facts systematically, scholars formed the opinion that the great majority of the medieval biblical mss are worthless for the study of vocalization and accentuation. This opinion was voiced most strongly by P. Kahle, who claimed that only mss, penned close to the time in which the vocalization and accentuation systems originated, could yield reliable information concerning the process of their invention and development. Thus he turned to older fragments from the Cairo Geniza in order to get information about the Babylonian and Palestinian systems,\(^7\) and to some old Tiberian codices (such as the Aleppo Codex, the Leningrad Codex Bl9a, etc.) in order to describe the original features of the Tiberian system.\(^8\) Later medieval mss he regarded as "mixed texts" which did not represent any system in its pure form, but rather resulted from the efforts of later generations to achieve a uniform text by way of compromise between the texts of the two rival Tiberian Massoretes, Ben-Asher and Ben-Naftali, and by the systematization of some minor elements which did not reach completion in the ancient schools (e.g., the ga'yot).\(^9\) The process of unification led to the formation of a textus receptus, which after the 13th century predominated in all biblical mss, and later also in the printed Bibles.

\(^7\) The results of his studies on the Babylonian material are mostly included in his Masoreten des Ostens (Leipzig 1913); and those on the Palestinian material in his Masoreten des Westens, I, II (Stuttgart 1927, 1930) (MdW).

\(^8\) Kahle, MdW, I, chapter one.

\(^9\) Ib., 17-20.
On the basis of a detailed comparative study, I have attempted to challenge the prevalent notion of the uselessness of the consonantal material in the medieval biblical mss.\(^{10}\) I hope to have proven that also late mss preserve ancient consonantal traditions (not scribal errors), which are within the framework of the Massoretic text-type, but are not identical with the authorized Massoretic text, and existed next to it from the fixing of an authorized version (about the 1st century C.E.) up to the first printed Bibles. Thus they are of significance for the study of the text.

Additional preliminary investigations in other fields of textual transmission have further demonstrated that the same holds true for accentuation and vocalization as well as other aspects of the MT (e.g., the Massorah). The tedious task of minutely studying the medieval mss was proven to be worthwhile and exceedingly important for our understanding the history of various textual phenomena. Such mss sometimes preserve precious information in various nuances of ancient sub-systems of accentuation and vocalization which cannot be recovered in any other way. I have collected material on various phenomena which bear out this claim.\(^{11}\) One of these is the subject matter of


\(^{11}\) This was done within the framework of a comprehensive research project of medieval biblical mss being carried out by the Institute for the History of Jewish Bible Research at Bar-Ilan University and headed by the present writer. The main goal of the project is a many-faceted typological description of biblical mss from the various Jewish transmission centers, in order to uncover the characteristics of older traditions in [6]
the present article. Concentrating on the discussion of the ga'ya, I shall try to put in relief the significance of the later biblical mss for a better understanding of the history of the punctuated and accentuated Tiberian Bible text.

Let us return to our particular topic. Scholarly theories regarding the development of the ga'ya began to take shape during the 19th century with the increase of research on accentuation, carried out particularly by Heidenheim,¹² Baer¹³ and Wickes.¹⁴ Baer, in particular, devoted a special discussion to the ga'ya,¹⁵ in which he formed consistent as well as rigid rules for the ga'yt which were in keeping with his general approach to the study of biblical accents. He regarded his rules as faithfully representing the ancient system of Ben-Asher. Consequently they became a kind of criterion for gauging the character of mss. A main element in Baer's system (following Heidenheim) was the set of rules for the light ga'ya. In his different textual aspects of the mss (consonantal-orthographical, vocalization and accentuation, massora, etc.), and the effect which the rivalry between the various traditions had on the crystallization of "mixed texts" during the Middle Ages. No less important is the demarcation of the extent of correlation between different textual fields in which characteristic phenomena of traditions are found.

¹² W. Heidenheim, Mishpetei ha-Te'amim (Rödelheim 1808).
¹³ S. Baer, Torat Emet (Rödelheim 1852).
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do opinion, in the Ben-Asher system a light ga'ya was marked in
every word which according to Baer's rule called for one. The
degree of proximity of a given ms to the Ben-Asher system
could then be tested by the theoretical model constructed by
Baer.

The absurdity of this concept reached its climax in the
judgment laid down by Wickes, as to the nature of the Aleppo
Codex, based on the photograph of a single page that reached
him,\(^{16}\) which was followed by Lagarde and others. Wickes argued
that since the Codex did not stand up to the criteria laid
down by Baer, its attribution to Ben-Asher must be mistaken.
The major difference between Baer's rules and the state of the
ga'yot in this Codex concerns the light ga'ya. According to
Baer, in a Ben-Asher text we would expect such a ga'ya to turn
up in a large number of words calling for one. However, on the
photographed page examined by Wickes only a few ga'yot appeared,
and these not in accord with a fixed rule. Wickes' conclusion
was that that Codex could not have been produced by Ben-Asher.

This approach was later rejected by Kahle. He correctly
stressed that the criteria for classifying a given text as a
Ben-Asher text cannot be left to speculation, but must be
deduced first and foremost from those ancient mss which are
accepted as Ben-Asher copies, such as the Aleppo Codex (A).
Kahle strongly defended the authenticity of the colophon of A,
which attributes the Codex to Aaron Ben-Asher.\(^{17}\) Since in A and

\(^{16}\) See Wickes (1887) (n. 5) VIII-IX; Kahle, The Cairo Geniza
(Oxford 1959) 111-112.

\(^{17}\) Kahle's basic discussion of this matter is to be found in
his M\&W, I (1927) (n. 7) lff.

[8]
in mss of a similar nature (like Leningrad B19a = L) we find a relatively small number of ga'yat (so Kahle), this fact must serve as a basis and as a criterion for classifying a given ms as a Ben-Asher text.

Kahle's approach was accepted by the vast majority of scholars and actually reversed the criteria for judging mss. But it did not basically affect the evaluation of the late medieval mss. Both Baer and Kahle maintained that these mss do not reflect the original state of ga'yat. According to Baer the corrupted state of those mss resulted from negligent recording, whereas Kahle maintained that the opposite is the case: the later mss reflect an ongoing process of systematization. Kahle argued that the large number of ga'yat is a characteristic of the late textus receptus, with which all the mss since the 13th century were aligned. However, as mentioned above, this form does not reflect any old tradition.

After Kahle published his opinion about 50 years ago, the subject of the light ga'ya has been discussed by other scholars. However, all focused their efforts on studying ancient mss (such as A, C, L, BM Or. 4445), and paid no attention to the late ones. Therefore, although some - especially Yeivin in his very important study on the Aleppo Codex - greatly increased our knowledge re the placing of ga'yat in some ancient mss, they did not actually challenge Kahle's general concept concerning the development of the ga'yat during the Middle Ages. His concept is repeatedly mentioned in handbooks and introductions, and even Yeivin describes the state of the ga'yat in late mss

16 See n. 4.
in the same way. ¹⁹

In the following pages this commonly held concept will be
reexamined. The main categories of the light ga’ya in late as
well as in early mss will be subjected to a comparison with
two goals in mind: (1) To obtain a true synchronic picture of
the actual state of the ga’yot in each of the two periods;
(2) to uncover potential genetic connections between the
practices of recording light ga’yot in each of those periods.
This enquiry will enable us to decide whether or not there were
further directed developments in the realm of the light ga’ya
in the late Middle Ages -- as is commonly assumed, and to
present a picture based on the facts.

This investigation will include the three main categories
of the light ga’ya in which is comprised the great majority of
words calling for a ga’ya²⁰ notation:
(1) ga’ya in a long vowel before a šewa (e.g., נָבָלִים; הַנַּבְלָה).
(2) ga’ya in a long or short vowel before a haṭef (e.g., נַעֻלָּה; הַנַּעֻלָּה).
(3) ga’ya in a long or short vowel before another vowel in a
non-accentuated syllable (e.g., הַגִּיקנָה; הַקִּיקֵנָה).

The material for the comparison will be taken from Joshua
1-2 and Jeremiah 51-52. At first, we will present a list of all
the words in the three above categories (divided into sub-
categories according to the phonetical structure of the words).

¹⁹ See Yeivin, op. cit. (n. 4) 91, and the English Summary, XVI.
²⁰ The phrase "words calling for a ga’ya notation", refers to
the words which according to the rules established by Baer (as
reflected in most printed Bibles), are expected to have a ga’ya
sign.
The examples will be numbered consecutively (Joshua: 1-87; Jeremiah: 1-137). This will be the basis of references in the following discussion. Fifteen mss, both early and late, will be collated. First we shall check 9 late medieval mss which exhibit the textual reality of the 13th-15th centuries in two main centers of Jewry - Spain and Ashkenaz. Then, six earlier mss will be studied, dating from the 9th to the 11th centuries. Five of these are from the Palestinian-Eastern region, one is from Italy.

The following manuscripts were used:

1. Spanish mss:
   (1) MS British Museum Or. 2201, dated 1246 (= BM 2201)
   (2) MS British Museum Or. 2626-8, dated 1483 (= BM 2626-8)
   (3) MS British Museum Har. 1528, undated (= BM 1528)
   (4) MS Sasoon 16, dated 1383 (= S 16)

2. Ashkenazi mss:
   (5) MS Paris 1-3, dated 1286 (= P 1-3)
   (6) MS British Museum Add. 15451, undated (= BM 15451)
   (7) MS British Museum Or. 2091, undated (= BM 2091)
   (8) MS British Museum Or. 9398, undated (= BM 9398)
   (9) MS Parma de Rossi 440, undated (= Pr. 440)

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21 The three dated mss stem from a period of about 250 years before the first printed Bible. According to C.D. Ginsburg, *Introduction to the Massoretico-Critical Edition of the Hebrew Bible* (London 1897; repr. New York 1966) 477, the undated ms, BM Or. 1528 was written about 1300.

22 The Ashkenazi transmission center includes Germany, Northern France, Bohemia and adjacent provinces. Only one of the mss examined here is dated. It seems that the other four were written in the 13th-14th centuries. The earliest is probably BM Add. 15451. According to Ginsburg (*ibid.* 614-615), it was written in the beginning of the 13th century.
3. Palestinian-Eastern mss:\textsuperscript{23}

(10) The Aleppo Codex of the 10th century attributed to
Aaron Ben-Asher (= A)

(11) The Cairo Codex of the Prophets, dated 895, attributed
to Moses Ben-Asher (= C)

(12) The Leningrad Codex B19a, dated 1008-9 (= L)

(13) MS Sasoon 1053, undated (= S 1053)

(14) MS Jewish Theological Seminary New York 232, undated
(= N 232)

4. Italian ms:

(15) MS Vatican Urbinati 2 (= V 2)\textsuperscript{24}

\textsuperscript{23} For technical considerations of page layout, some extended notes were placed at the end of the article. For n. 23, see p. 80.

\textsuperscript{24} This ms, which seems to have originated in Italy, is vocalized in the Palestinian-Tiberian system. According to the appended colophon, it was written in 979 C.E. See S.A. Birnbaum,\textit{ The Hebrew Scripts, I} (Leiden 1971) 289f; II (London 1954-57), pl. 298 (unfortunately, Birnbaum chose the wrong page for his paleographic demonstration, since it is one of two added by a later scribe to replace damaged pages (Ex. 25:32-26:20)). Although the colophon does not seem to be original, all features point to the relative antiquity of the ms. It should not be dated later than the 11th century. This is also the opinion of Prof. M. Beit-Arie, Head of the Institute for Hebrew Paleography, Jerusalem, who kindly gave me his view on the subject.
WORDS CALLING FOR A LIGHT GA’YA IN JOSHUA 1-2

1. With a long vowel before seva (23 words):

(a) With gamash:  
1. ורְשָׁק (1:15)  
2. רְדֵפָה (2:7)  
3. קָצָא (7)  
(b) With sere:  
6. וְשַׁמ (1:14)  
7. רֹמְלָה (2:1)  
8. וּבְנַטְנָא (10)  
(c) With holom:  
11. שֶׁלֶק (1:10)  
12. חֶלֶם (11)  
13. אֲרֵדֵם (2:7)  
14. כָּלָה (9)  
15. הָרֵדֵמ (16)  
16. הָרֵדֵמ (16)  
(d) With suruq:  
23. לְבָלוֹכָה (1:4)

2. With a vowel (long or short) before havet (40 words):

(a) With patah:  
24. יַאֲרָע (1:1)  
25. יַפְנֵש (3)  
26. יַפְנֵש (5)  
27. קָלָבְּאָם (6)  
28. קָלָבְּאָם (7)  
29. קֶלֶש (8)  
30. קֶלֶש (12)  
31. מַרְעֵד (14)  
32. מַרְעֵד (15)  
33. מַרְעֵד (16)

34. יַאֲרָע (17)  
35. יַפְנֵש (2:5)  
36. יַפְנֵש (7)  
37. קָלָבְּאָם (7)  
38. קָלָבְּאָם (7)  
39. קֶלֶש (7)  
40. קֶלֶש (12)  
41. מַרְעֵד (13)  
42. מַרְעֵד (19)
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(b) With segol:
(43) נָאָשׁי (1:6) (47) וּלֶמֶת (2:6)
(44) קְרַבָּה (7) (48) חָלַמָּה (10)
(45) לאָמָה (9) (49) נָאָשׁי (14)
(46) נָאָשׁי (18)

(c) With gâmes:
(50) הָנַּבְּשֵׁים (2:3) (56) וַחֲנַשָּׁה (7)
(51) הָנַּבְּשֵׁים (4) (57) מַנְּסֶרַץ (10)
(52) הָנַּבְּשֵׁים (4) (58) כַּנְּסָרַץ (14)
(53) הָנַּבְּשֵׁים (5) (59) מַנְּסֶרַץ (17)
(54) הָנַּבְּשֵׁים (5) (60) כַּנְּסָרַץ (23)
(55) הָנַּבְּשֵׁים (6)

(d) In a word calling for both a light and a firm ga’ya:
(61) נִטְוּר (1:9) (63) נִטְוּר (16)
(62) נִטְוּר (11)

3. With a vowel (long or short) before another vowel, which is not in the accented syllable (24 words):

(a) With patah:
(64) הַתָּחִים (1:4) (69) בָּלְו (18)
(65) מַעֲבָּר (14) (70) מַסֵּפָּר (18)
(66) חַתָּלָה (2:15) (71) בָּלְו (21)
(67) קַחָּפָה (15) (72) נִטְבַּר (23)
(68) נַכְּחָמָה (15)

(b) With segol:
(73) אָלֹז (1:5)

(c) With gâmes:
(74) נַכְּנִיץ (1:2)

(d) With šere:
(75) מַחְיָמָר (1:4) (77) מָקְהָר (23)
(76) אֶמְרַכָּה (2:9)

(e) With hâlem:
(78) נְלַיְלָה (1:11) (81) נְלַיְלָה (2:11)
(79) נְלַיְלָה (13) (82) נְלַיְלָה (15)
(80) נְלַיְלָה (15) (83) נְלַיְלָה (18)

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WORDS CALLING FOR A LIGHT GA YA IN JEREMIAH 51-52

1. With a long vowel before seva (37 words):

   (a) With gameš: 
      (1) דֹּגֵנ (51:4)  (10) רִקָּה (41)  (19) אֶרֶץ (52:7)  (28) רוּפֵא (21)  (37) שֶׁמֶר (24)
      (2) עַלְמָה (5)  (11) בִּנְכַל (49)  (20) רְכֵל (7)
      (3) נֹפֶל (8)  (12) רַשָּׁנִים (57)  (21) יַרְבָּע (21)  (29) רוּפֵא (21)
      (4) הָרִידֵר (30)  (13) תַּרְחִיב (58)  (22) רוּפֵא (21)  (30) רוּפֵא (21)
      (5) נָשָׁב (30)  (14) נֹרֵבֵי (59)  (23) יַרְבָּע (21)  (31) יַרְבָּע (21)
      (6) נַשָּׁח (30)  (15) נְקַח (52:3)  (24) יַרְבָּע (21)  (32) יַרְבָּע (21)
      (7) שָׁפֶר (32)  (16) נַחֲצ (14)  (25) אֶרֶץ (52:7)  (33) שֶׁמֶר (24)
      (8) נָוֵת (37)  (17) בִּנְכַל (15)  (26) אֶרֶץ (52:7)  (34) נֹרֵבֵי (53)
      (9) רוּפֵא (39)  (18) רֵיקָה (18)  (27) שֶׁמֶר (24)

   (b) With se'ere: 
      (19) יַרְבָּע (7)

   (c) With holem: 
      (21) יַאֲל-לֶשֶׂכ (51:1)  (30) שֶׁמֶר (24)  (35) הַכְּפַל (16)
      (22) רוּפֵא (2)  (31) רִשָּׁנִים (35)  (36) רוּפֵא (21)
      (23) יַרְבָּע (7)  (32) שֶׁמֶר (48)  (37) שֶׁמֶר (24)
      (24) שֶׁמֶר (12)  (33) שֶׁמֶר (53)  (38) לְכֵל (16)
      (25) אַרְבָּע (12)  (34) נֹרֵבֵי (52:15)  (39) לְכֵל (16)
      (26) אַל-לֶשֶׂכ (12)  (35) נֹרֵבֵי (16)  (40) לְכֵל (16)
      (27) מַשַּׁדָּרֵג (16)  (36) רוּפֵא (21)  (41) לְכֵל (16)
      (28) רוּפֵי (21)  (37) שֶׁמֶר (24)  (42) לְכֵל (16)
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2. With a vowel (long or short) before ḫatef (34 words):

(a) With pataḥ: (38) הקדימה (51:3) (49) רアウלייר (46)
(39) צנבר (6) (50) טעלל (50)
(40) חזון (12) (51) צי-תעלת (53)
(41) משעה (18) (52) טְכַּסִי (57)
(42) פּּּּלֶר (19) (53) זְעֵר (52:8)
(43) רַבּ (19) (54) רַיער (9)
(44) הָרָתֵר (36) (55) דָּבָר (12)
(45) יַלֶעְד (39) (56) דָּמֵשׂ (30)
(46) הַמְּקֵר (42) (57) דָּמֵשׂ (31)
(47) יָבִיב (43) (58) חָרָה (34)
(48) דָּלָאִים-יָטָר (43)

(b) With segol: (59) דַּמֵּשׁ (51:52) (60) רַמֵּשׁ (52:6)

(c) With qames: (61) דַּמֵּשֶׂ (51:32) (62) פָּנָה-גָּנִים (52:4)
(63) דַּמֵּשׁ (52:4) (64) דֶּבֶר (7)

(d) With šere: (65) נָגָל (51:5) (66) נָגָלָה (34)
(67) מִשָּׂר (45)

(e) With ḫolem: (68) בָּבָא (51:61)

(f) In a word calling for both a light and a firm ga’ya:
(69) אָלֶ-מעשיה (51:10) (70) אָלֶ-מעשיה (52:4)
(71) רָחַב (50)

3. With a vowel (long or short) before another vowel, which is
not in the accented syllable (66 words):

(a) With pataḥ: (72) חָצֵי (51:11) (75) לַעֲלֵי (52:11)
(73) צָעַר (28) (76) לַעֲלֵי (22)
(74) חוֹקֵי (57)
Systems of Light Ga’yon

(g) With ḫiriq: (135) רֶכֶץ (51:2) וֹוֶרֶד (137) וֹוֶרֶד (52:3)
(136) וֹוֶרֶד (5)

Systems of Light Ga’ya Notation in Late Medieval Biblical Manuscripts

The nine late biblical mss stemming from the 13th-15th centuries reflect different systems of light ga’ya notation practiced in the various Jewish transmission centers during the last centuries of the Middle Ages, starting with the absence of any notation of light ga’ya to a partial notation and, finally, a systematic notation in every word which calls for a light ga’ya.

Four definite systems are represented in the above mentioned mss: (1) Absence of light ga’ya notations; (2) Systematic notation of a light ga’ya in all appropriate words; (3) Selective notation of a ga’ya according to the phonetic structure of the word; (4) Selective notation of a ga’ya according to the type of accentuation.

Although the mss were chosen to represent the medieval textual reality in the realm of the light ga’yon, one should not regard them as representatives of all possible variations. Nor does the numerical ratio between mss reflect an actual proportion of the different systems. The presentation is purely phenomenological. Our intention is to illustrate the very existence of a variety of systems as well as their main characteristics. Only after examining all the available evidence will it be possible to reach a conclusion regarding the exact geographical scope of the various systems.
Here are the details:

1. Absence of light ga'ya notations

This is exhibited (with a few isolated exceptions) by two Spanish and one Ashkenazi mss: BM 1528; S 16; Pr 440, as shown below:

(a) BM 1528: In Joshua 1-2 no light ga'ya is recorded in 86 out of the 87 cases of the above list (single exception: 23). In Jeremiah 51-52 the situation is similar: of 137 instances, only 2 are actually marked with a ga'ya (5; 135).

(b) S 16: In Joshua 1-2 only in one instance a ga'ya is marked (17). In Jeremiah 51-52 there are more cases (18; 29; 35; 36; 116; 121; 123; 127; 128; 130; 132; 133). However, it should be pointed out, that 8 of the 12 instances concern particular words (גדים; והם). This fact testifies to particular conditions of formation.26

(c) Pr 440: In Joshua 1-2 there are 5 cases of a light ga'ya (1; 6; 10; 21; 76). In Jeremiah 51-52 there is only one (37). Two examples are altogether missing from the ms (31; 62).

2. Systematic notation of a light ga'ya in all appropriate words

This method is employed by two Ashkenazi mss: BM 15451; P 1-3, as shown below:

(a) BM 15451: In Joshua 1-2 all the examples are marked with a ga'ya. In Jeremiah 51-52 there is only one case without a ga'ya (26). A further characteristic of this ms is that if the word demands two light ga'yot, usually both are recorded, e.g., ותרנופים, והם. Similarly, two ga'yot are recorded when the word calls for both a light and a firm ga'ya, e.g., שֻׁיֶּה, והם, and the like.

26 For a possible explanation, see n. 30.
(b) P 1-3: In Joshua 1-2 there are two exceptions to the systematic recording of the light ga’ya (85; 86 - both the same word). In Jeremiah 51-52 there are 17 cases. It seems, however, that most of these are not random instances, but rather the result of a particular process which affected certain words: 27 יערי (116; 121; 122; 130; 131; 132); יערי (123; 127; 128; 129; 133); יערי יערי (109, 111, 112); all of them are proper names (three other cases: 73; 74; 88).

Like the previous one, also this ms records two light ga’yot when demanded by certain words, e.g. יערי יערי. However, it differs from the previous ms in its manner of recording the combination of a light with a firm ga’ya in the same word; two ga’yot are recorded only in some words (like יערי יערי), while in others (like יערי יערי) only the light ga’ya is recorded. 28

3. Selective notation of a ga’ya according to the phonetic structure of the word

This system of notation is found in two of the above Ashkenazi mss: BM 2091 and BM 9398, although there is no complete correlation between them concerning details of the sub-categories.

(a) BM 2091: In Joshua 1-2 a light ga’ya is found in the following structures:

27 Although the notation system of this ms is contrary to that of ms S 16, both have common exceptions. For a possible explanation, see n. 30.
28 This subject will be discussed more thoroughly in a forthcoming study on the firm ga’ya.
(1) With a long vowel before a šēwa - the ga'ya is recorded with the gameš (one exception: 1). However, none is recorded with the ġere and the ḥolem (two exceptions in the ḥolem: 11; 15).

(2) With a vowel before a ḥaṭef - the ga'ya is recorded in all examples with a pataḥ and with a gameš. However, it is not recorded with the segol.

(3) With a vowel preceding another vowel - no ga'ya is recorded regardless of the type of vowel (three exceptions: 69; 70; 72).

This picture of the selective notation is confirmed by the text of Jeremiah 51-52, in which we find a ga'ya in the following structures:

(1) With a long vowel before a šēwa - the selective notation is as above (one exception with the ġere: 19).

(2) With a vowel before a ḥaṭef - as above (with no exception). In these chapters there are two other vowels before ḥaṭef; ġere and ḥolem. With both, as with the segol, there is no ga'ya.

(3) With a vowel preceding another vowel - as above, no ga'ya is recorded with any type of vowels (four exceptions: 90; 105; 131; 134).

(b) BM 9398: The selective recording of the ga'ya occurs only in Joshua 1-2, whereas in Jeremiah 51-52, ga'yot are absent. The reason for this is that the last chapters of Jeremiah were written by a later scribe after the original pages were lost. The Vorlage used by the scribe seems to have employed a system of ga'ya notation similar to the one described in 1 above. Our description of the system found in this manuscript therefore will be based only on Joshua 1-2. There the ga'ya is recorded according to the following selective principle:
Systems of Light Ga’yot

(1) With a long vowel before a šewa - in all types of vowels (exceptions: 1; 19; 22; 23).

(2) With a vowel before a ḥаṭeʃ – only with the pataḥ is a light ga’ya recorded. (There are fifteen instances which can be discerned in the photocopy. Three are illegible: 24; 26; 31, and one is missing: 35.) On the other hand there is no ga’ya recorded either with the segol (one exception: 79), or with the qames (one exception: 53).

(3) With a vowel preceding another vowel – a ga’ya is recorded with all examples of the pataḥ and the qames, but not with the ḫolem, the suruq or the ḥiriq (one exception with the ḫolem: 79).

4. Selective notation of a ga’ya according to type of accentuation

This principle of notation is typical of two Spanish manuscripts: BM 2201 and BM 2626-8 which show a tendency to record a light ga’ya in the disjunctive accents. However, this usage is adhered to systematically in the cases of only two accents: the paṣṭa and the zagef qaṭan when not accompanied by a conjunctive accent. With these two the practice affects more than two-thirds of the instances. The details are as follows:

(a) BM 2201: In Joshua 1-2 there are 18 words with a light ga’ya, all accentuated with disjunctive accents (9; 12; 18; 21; 24; 28; 29; 36; 52; 64; 66; 67; 72; 76; 78; 79; 84). However, as mentioned above, only with respect to the paṣṭa and the zagef can we speak of systematic recording. Fifteen out of the 18 instances are marked with these two accents (10 with paṣṭa and 5 with zagef). In order to get a clearer impression of the degree of recording a ga’ya with these two accents we will enlarge the body of text under review and check the complete book of Joshua.

[22]
(1) *With the accent pashṭa* - of 74 words calling for a light *ga’ya*, 49 are so marked (about 66%). A minute examination shows that the frequency of the occurrence of a *ga’ya* with this accent also depends partially on the phonetic structure of the word: in two categories -- long vowel before *sewa* and a vowel before another vowel -- in the great majority cases a *ga’ya* is recorded (42 out of 50), whereas in the category of a vowel before a *hafēf* only 7 instances out of 24 are recorded.

(2) *With the accent zaqef* - of 79 words calling for a light *ga’ya*, 35 are unaccompanied by a conjunctive accent (the *munah*) (*e.g.* מַעֲנָה). Of these 23 are marked with a *ga’ya* (about 66%). However, of the other 44 words which are accompanied by a conjunctive accent (*e.g.* מַעֲנָה) only the minority (11 words or 25%) are marked with a *ga’ya*.

A similar picture can be found in Jeremiah:

(1) *With pashṭa* - in the above list of chapters 51-52, 15 words are accentuated with *pashṭa*, of which nine are marked with a *ga’ya* (15; 16; 34; 55; 81; 98; 123; 133; 136).

(2) *With zaqef* - there are not many examples in the above list, so we have included 12 chapters in the examination (41-52): There are 17 words with *zaqef* unaccompanied by *munah* and calling for a *ga’ya*, of which 14 are indeed so marked. On the other hand, only 7 out of 19 words with *zaqef* accompanied by *munah* are marked with a *ga’ya*. 

[23]
(b) BM 2626-8: The findings in the entire book of Joshua are as follows:

(1) With the accent paṣṭa - of 74 words calling for a light ga'ya, 48 are actually so marked (about 65%). Also here the rate of occurrence of a ga'ya is partly dependent on the structure of the word; only in a minority of cases of a vowel before ḫaṭef ga'yt are recorded (8 out of 24).

(2) With the accent zaqef - of the 35 words unaccompanied by the conjunctive munah, 25 are marked with a ga'ya (about 75%). On the other hand, only 9 out of 44 words accompanied by munah are so marked (about 20%).

In the book of Jeremiah a similar picture shows:

(1) With paṣṭa - of the 15 words accentuated with paṣṭa in the above list, 9 are marked with a ga'ya (the same as in the previous ms).

(2) With zaqef - of the 17 words unaccompanied by munah in the last 12 chapters, 12 are marked with a ga'ya, whereas of the 19 words which are accompanied by munah only 4 are so marked.

Systems of Light Ga'ya Notation in Early Medieval Biblical Manuscripts

We shall now turn our attention to the six early manuscripts. Also here we note a variety of systems of light ga'ya notation; the similarity between most of them and those found in the later mss examined above should be noted. The following description will be presented as above.

1. Absence of a light ga'ya notation

Among the 6 early mss of the above list, this characteristic is found in S 1053. In Joshua 1-2 no light ga'ya is recorded in [24]
the 87 instances of the above list, with 4 exceptions (23; 75; 76; 84) - five further instances must be classified as doubtful because of the unclear writing. The same situation is reflected in Jeremiah 51-52: Only six cases (9; 12; 15; 30; 76; 116) out of 137 are marked with a light ga'ya.

2. Systematic notation of a light ga'ya in all appropriate words

This method is employed in two manuscripts, N 232 and V 2, as follows:

(a) N 232: The ms is defective to a large extent. It contains only parts of the Latter Prophets. Consequently, we confined our examination to Jeremiah only. Out of 137 words of the above list, 107 have a light ga'ya (about 79%). The 30 exceptions are found mainly in two categories: eight (out of 37) - in a long vowel before a šewa (1; 3; 8; 26; 28; 30; 32; 37); 20 (out of 66) - in a vowel before another vowel (73; 74; 78; 79; 80; 83; 85; 86; 88; 93; 97; 100; 109; 110; 112; 114; 117; 119; 120; 134). On the other hand, in a vowel before haṭef there are only two exceptions (out of 34). The relatively large number of exceptions in the category of a vowel before another vowel recalls ms P 1-3. There the cases were concentrated in this category as well. However, whereas in P 1-3 most of the exceptions seem to have resulted from a particular process affecting certain words, no such process can be ascertained here, and the exceptions must be understood as sporadic.

This ms (like the late ms BM 15451) usually records two ga'yet when a word calls for both a light and a firm ga'ya.²⁹

²⁹ See previous note.
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However, when two light ga’yot are demanded in the same word, there appears to be no consistent notation; at times two ga’yot are indeed marked (e.g. לַעֲרוֹביע (22)), at other times only one (e.g. הַלֵּהוֹא (58)). Occasionally, erasure marks can be discerned in the photocopy. It seems that a later annotator erased one of the two ga’yot originally recorded (e.g. הַלֵּהוֹא (27); וְסַלַּה (25)).

(b) V 2: In Joshua 1-2, a ga’ya is recorded in the great majority of the 87 instances of the above list (there are 3 exceptions: 1; 25; 83; five other instances are doubtful owing to unclear writing). Jeremiah 51-52 present a similar picture (12 cases out of 137: 34; 74; 80; 83; 90; 95; 113; 114; 121; 125; 127; 132). In this ms, two ga’yot are marked when the word calls for two light ga’yot, and when a firm and a light ga’ya are required (as in the later ms BM 15451).

3. Selective notation of a ga’ya according to the phonetic structure of the word

In the early manuscripts we did not find a selective system which is similar in details to the one found in the later mss. But a certain selection of notation according to the above mentioned principle can be traced also in the Cairo Codex (= C). The system used by C is generally akin to that of the two previous mss in which a ga’ya is recorded in almost every word calling for one. However, C has one notable exception: in the category of a vowel preceding a hâtef only a small minority of the appropriate words have the ga’ya when the vowel is a patah.

30 For note 30, see p. 80.
31 See above, p. 63.
Twenty out of the 87 words in the above listing from Joshua 1-2 are illegible in our ms. The details of the 67 legible ones are as follows:

(1) With a long vowel before a סינא — the light ga'ya is recorded in 12 out of 17 words (five exceptions: 7; 10; 17; 20; 22).

(2) With a vowel before a הַּכָּפ — when the vowel is a pataḥ, only 6 out of 16 words have a ga'ya (without a ga'ya: 25; 26; 29; 34; 35; 38; 39; 61; 62; 63). In other types of vowels of this category almost all the appropriate words have a ga'ya.

(3) With a vowel preceding another vowel — a ga'ya is recorded in 16 out of 19 words (three exceptions: 71; 85; 86).

Chapters 51-52 in Jeremiah present a similar picture:

(1) With a long vowel before a סינא — the ga'ya is recorded in 29 out of 37 words calling for one (exceptions: 8; 11; 13; 19; 20; 31; 32; 35).

(2) With a vowel before a הַּכָּפ — when the vowel is a pataḥ, the great majority of the 24 words calling for a ga'ya are not so marked (six exceptions: 38; 40; 44; 45; 46; 52). Of the other types of vowels in this category, 6 out of 10 have a ga'ya (exceptions: 60; 63; 64; 67).

(3) With a vowel preceding another vowel — the ga'ya is recorded in 63 out of 66 words calling for one (exceptions: 78; 92; 102).

In conclusion: The Cairo Codex testifies to two important facts:
Systems of Light Ga'yot

(1) In the 9-10th century there already existed a systematic
notation of a light ga'ya. (2) The forces which caused the
formation of a selective notation of a light ga'ya according
to the phonetic structure of the word were already at work as
early as the 9-10th century.

4. Selective notation of a ga'ya according to type of accentu-
tuation

This principle is characteristic of two of the above
mentioned early mss: the Aleppo Codex (= A) and the Leningrad
Codex B19a (= L).

(a) A: The employment of the light ga'yot in A has been dis-
cussed in detail by Yeivin. According to his description
"...there are no rules for noting light ga'yot, there are only
trends. These depend on the accent of the word and on its
structure. The tendency is most pronounced (approx. 80% of the
instances) when the word is accentuated by a pa'sa. If the
accent is zaqef, a ga'ya is recorded in about 35% of the in-
stances. If the word is accentuated by any other disjunctive
accent and certainly if the accent is a conjunctive one, a
gai'ya is only rarely marked!"32 This description essentially
fits the notation of ga'yot in the later mss. BM 2201 and BM
2626-833 with the exception that unlike the usage in the above
mentioned mss, in A the tendency to mark a ga'ya with the zaqef
does not extend to the majority of instances. This is confirmed
by our findings in Joshua and Jeremiah.

32 See Yeivin, op. cit. (n. 4), p. 147. In my opinion, a major-
ity of 80% must be designated a "rule" and not a "tendency" as
Yeivin put it. Yeivin himself uses the term "rule" with other
phenomena, when the same percentage of majority is involved. See,
for instance, p. 102, concerning the rules of the firm ga'ya.

33 See above, pp. 65-67.
(1) With the accent pašta – out of 74 words with this accent in the entire book of Joshua\textsuperscript{34} which call for a light ga'ya, 59 are so marked (about 75%); in Jeremiah 51-52, 11 out of 15 (about 74%). The ratio of recording a ga'ya with a pašta is therefore slightly higher in A than in the later mss mentioned above. Also A does not differentiate between the various structural categories in this matter. Even in the case of a vowel before haṭef, in A most of the words are marked with a ga'ya, contrary to the practice in the afore-mentioned two late mss.

(2) With the accent zaqef – Contrary to the accent pašta, A is less consistent than the afore-mentioned late mss in marking a ga'ya with the zaqef. Furthermore, there is but little difference concerning the ratio of recording ga'yot between words with zaqef unaccompanied by munah and those which are accompanied by munah. Out of 79 words calling for a ga'ya in Joshua, 35 are unaccompanied by a munah. Of these only 14 are marked with a ga'ya (40%). Of the 44 which are accompanied by munah, 10 are marked with ga'ya (about 23%). In Jeremiah 41-52,\textsuperscript{35} the percentage of words unaccompanied by munah and marked with a ga'ya is even less: only 4 out of 17 (about 24%).

\textsuperscript{34} As stated above (p. 65), we studied the material under review with regard to words accentuated with pašta and zaqef for the entire book of Joshua.

\textsuperscript{35} On this phenomenon, our examination covers 12 chapters of Jeremiah (41-52), as stated above, p. 66.
(b) L: In this ms - as in the mss BM 2201 and BM 2626-8 - most words calling for a ga'ya are so marked, both when the accent is pasqa as well as when it is zaqef.

1. With the accent pasqa - L resembles A concerning the rate of ga'ya notation. Fifty-five of the 74 words in Joshua calling for a ga'ya are so marked (about 74%); in Jeremiah 51-52, 11 out of 15 (about 73%).

2. With the accent zaqef - The words unaccompanied by munah and marked with ga'ya constitute the majority -- contrary to A, and resembling the aforementioned late mss: in Joshua, 24 of the 35 (about 69%); in Jeremiah 41-52, 16 out of the 17 (about 94%). Also here the structural category which causes the drop of the percentage average is the vowel before Ḫāṭef. In this category only a very small majority of words are marked with a ga'ya, resembling BM 2201 and BM 2626-8.

Analysis and Conclusions

1. The employment of the light ga'ya in the late medieval mss shows various systems of notation: from the absence of any notation, to notation in every word requiring one, as well as intermediate systems of selective notation. On the grounds of these findings we have to reject unequivocally the fundamental assumptions of the current theory on the history of the light ga'ya, namely that a uniform practice of a systematic notation of ga'ytot predominated all late medieval mss, and that it was brought about by a process of intentional systemization.
2. There was no unified text common to all Jewish transmission centers regarding the practice of notation. Such a common text did not even exist within any of the individual centers. In Spain, for example, we find mainly two major systems: Absence of ga'yet, and selective notation according to type of accentuation. On the other hand, I have not as yet found any Spanish ms which practiced a systematic notation of a light ga'ya in every appropriate word. It appears, then, that what Kahle and his followers considered to be a clear sign of the late medieval mss, was completely non-existent in a Jewish center which was considered the most prestigious by medieval scholars.

3. In Ashkenaz, on the other hand, there did exist a practice of systematic notation of the light ga'ya in every appropriate word, but it was far from being the only system. It seems that in Ashkenaz a greater variety of systems was known than in Spain. Only one of them was common to both centers, namely

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36 At present it seems that the second system was the most common in Spain. A final conclusion in this matter can only be reached after examining all existing Spanish mss.

37 Biblical codices written in Spain were esteemed as highly precise by annotators and scholars of the late Middle Ages. The phrase *sifrei sefarad ha-meduyaqim* - the exact Spanish codices - was widespread in all Jewish transmission centers. See, inter alia, Lonzano's preface to his *Or Torah* (n. 3).

38 In addition to the two mss representing this system in our research, I also found it in a large number of Ashkenazi mss. It can be observed as well in a number of late Italian mss (e.g., ms Vatican Rossiana 554). This fact together with evidence of the older Italian ms V 2 (p. 69) may point to the channels of transmission through which that system was brought to Ashkenaz.
the absence of ga’ya notation. In addition to the systematic notation, in Ashkenaz there was also known a system based on a selective principle. However, it is completely different from the one practiced in Spain, being based on the phonetic structure of the word. Hence, what was supposed to be a general uniform system of all the late mss turns out to be merely one of various systems practiced in certain transmission centers.

4. The plurality of ga’ya notation in the late Middle Ages also makes unacceptable the second component of the prevailing theory— the late process of systematization. The hypothesis that there was such a later "development" is based on the assumption that the starting point of this development was a more or less general situation of an unsystematic notation of light ga’yot, and that a diachronic development brought about another overall situation of a systematic notation. Since our findings have shown that such an overall situation never existed with regard to the late medieval mss, there is no room for a theory of "development" that brought it about.

5. One may still raise the question whether it is altogether wrong to maintain that there had been a further development towards systematization during the late Middle Ages, or whether this view could be justified as a description of at least a partial reality within certain circles of text transmitters.

99 The Ashkenazi material which I collected shows that the selective notation is less widespread than the systematic one. Neither the one nor the other distinguishes between types of accents—disjunctive and conjunctive, or between different types of disjunctive ones.
e.g. in Ashkenaz. In order to answer this question satisfactorily, we have to consult the older mss re the situation of light ga'yot notation in the early times.

However, before leaving the later sources let us consider first how they bear upon this problem.

6. The following arguments can be raised against the above suggestion:

(1) Supposing that, as maintained by many scholars, the starting point of the "development" was a general situation of an un-systematic notation, we would be forced to assume that the "development" took different and even contradictory directions: while some of the mss seem to improve the early situation by recording every word calling for a light ga'ya, others show a degeneration of the original situation, causing a complete or nearly complete disappearance of the light ga'ya. Is there any reason for a "development" to take such extremely opposing directions?

(2) It is even harder to assume a direct development of the selective system according to the phonetic structure of the word found in some Ashkenazi mss, starting from a supposed ancient state of ga'yot as represented by "Ben Asher" mss such as A. Would it make any sense to assume that parallel to the Ashkenazi naqdanim who systematized the ancient practice, there were also other naqdanim in Ashkenaz who continued to record only part of the ga'yot, and invented new principles according to which a naqdan should or should not mark a light ga'ya?

(3) Whenever a late medieval textual invention is suggested, also the following fundamental question ought to be considered: the late Middle Ages are regarded as a period of collection
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and preservation in nearly all aspects of vocalization and accentuation and not as a time of invention and innovation. Is it justified to exclude any element of biblical text transmission from this general concept. Is it possible that later annotators actually permitted themselves to exercise creative liberty only in the realm of the ga’ya? The unreasonableness of such an assumption is made particularly clear in the light of the textual situation in Spain. We have seen that a large number of Spanish mss preserve remarkably well a system of ga’yt which is very close to that of the ancient so-called “Ben Asher” Codices (e.g., A or L). ¹⁰ These mss leave no room for doubt that the tendency of preservation extended also to the ga’yt, and that the system of the light ga’ya represented by A and L, continued to exist and to be transmitted in its own line without intentional interference until the end of the Middle Ages.¹¹ Should we assume that the opinion of the annotators in Ashkenaz regarding the modification of the transmitted tradition differed from that of their Spanish colleagues?

(4) The arguments against the possibility of creative activity in Ashkenaz to perfect a supposedly imperfect traditional state of ga’yt are supported by an examination of the work of the well-known Ashkenazi annotator, Rabbi Yequiel b. Yehuda ha-nagdan, who lived in the beginning of the 13th century. This annotator left a treatise called Ein Ha-gore, part of which is devoted to a systematic description of ga’yt rules. ¹² Anyone

¹⁰ See above, pp. 71-73.
¹¹ For note 41, see p. 81.
¹² See Y.G. Gumperts, in Leshonenu 22 (1958) 36-47; 137-146.
reading this treatise attentively will realize that even learned Ashkenazi nagdanim did not invent systems, but on principle remained faithful to the tradition which they had received from their mentors. Even when they suspected that their transmitted tradition lacked certain elements, their suspicions did not result from grammatical or other speculative considerations, but rather from a comparison with another esteemed tradition (e.g., the Spanish one).\(^3\) In other words, we may expect to find mutual influences between different ga'yon systems in the later (as well as in the earlier) Middle Ages, resulting from a contact of conflicting texts. We have, however, no proof that new systems of ga'yon notation developed, i.e., of a systematic schematization by later generations.

7. The above mentioned considerations based on the later evidence, are conclusively confirmed by the earlier sources of the 9th-11th centuries, which are close to the time when the ga'ya notation originated. We have seen that the earlier mss, just as the later ones, cannot be regarded as representing one uniform practice of notation; various systems of recording a light ga'ya already existed in that early period, not long after oral, phonetic and musical traditions were first committed to writing. Even if the early Tiberian testimonies are meager compared to the later ones, one still finds in them nearly all the main systems which are represented in the later mss, starting with the absence of light ga'yon (represented in our study by S 1053) and ending with the systematic notation in all appropriate words (e.g., N 232 and V 2).\(^4\) The notation practiced

\(^3\) For note 43, see p. 81.

\(^4\) For note 44, see p. 83.
in A or in L and similar mss, therefore, cannot be regarded as the characteristic representative of that period or as being the single starting point for a later development. Rather, we should see in it one practice among many which developed simultaneously in various ancient schools of transmission. And just as the notation system represented by A and L continued its existence until the end of the Middle Ages in certain channels of transmission, so did other systems reach later schools of annotators in the Jewish world.\footnote{Another question which requires special consideration is how certain systems originating in Palestine found their way only to Ashkenaz, while other appeared only in Spain. This question, however, concerns not only the ga'ya. In the area of punctuation a similar process took place. Some pointing systems of the Tiberian-Palestinian school were absorbed only in Ashkenaz and not in Spain. It is also possible that a connection exists between the two issues (see previous note), but we cannot go into details here.}

8. All the aforementioned considerations do not rule out the possibility that new crystallizations of light ga'yet were formed in the late Middle Ages after all. When various systems run side by side, this process is to be expected and cannot be prevented. Where conflicting texts met, elements of one system penetrated the other and created mixed texts. Some of these preserved their original characteristics while others lost their identity. However, these processes cannot be aligned with the creative stratum of textual tradition, but rather represent transmission phenomena. They do not create a system, but may confuse existing ones. The extent of preservation of early typological features in a given text is a problem of the individual history of each ms, and can be decided only by investigating each one separately.
Two of these mss are attributed to the last Massoretes of the Ben-Asher family: the Cairo Codex to Moses Ben-Asher, and the Aleppo Codex to his son, Aaron Ben-Asher. Although this ascription has been challenged by some scholars, there no longer seems to be any room for doubt, at least as far as A is concerned. See the latest summary on this subject by M. Goshen-Gottstein, "The Aleppo Codex and the Rise of the Massoretic Bible Text", BA (1979) 145-162. With regard to C the situation is more complicated although its colophon attests to the scribe and the date. As for the discussion, see inter alia, J.L. Teicher, "The Ben-Asher Bible Manuscripts", JJS 2 (1950/51) 17-25; P. Kahle, "The Hebrew Ben-Asher Bible Manuscripts", VT 1 (1951) 161-167. The Sasso Codex 1053 is undated, but its dating to the 10th century has won acception. The Leningrad Codex B19a is the earliest dated ms of the complete Bible known. According to its colophon it was copied from "the corrected and clear codices prepared by the master Aaron Ben Moses Ben-Asher". Concerning the resemblance between this ms and A, see Yeivin, op. cit. (n. 4), 357 ff. This codex was written in Egypt. This will explain the term "Palestinian-Eastern" by which I chose to define this type of ms, viz. mss that bear the mark of Palestinian transmission even though they may have been written in an adjacent region. Ms N 232 is not complete. Despite the fact that we could not use it for all the texts examined, we included it in our investigation because of the illustrative state of its ga'yet. The estimated date of its writing is the 10th or at the latest the 11th century.

Two of the 12 exceptions occur in the word נঔכלהיר and another in קִברָהָ. The other 4 occurrences of נַטָלַהּ and one of נַטָלַהּ are not vocalized at all. The problem of unvocalized words which occur in certain mss is in itself interesting, and deserves special investigation. It should be noted that these very words appeared as exceptions also in two of the later medieval mss mentioned above: S 16 (p. 62 above), and P 1-3 (p. 63 above). Our ms will possibly present us with a plausible explanation of a puzzling problem: although the notation systems of those mss radically differ from each other, they have the very same words (נַטָלַהּ; נַטָלַהּ) as exceptions. This could have resulted from a process which took form in stages: (1) The unvocalized words נַטָלַהּ and נַטָלַהּ were found in mss which had different, and sometimes even contra-
Systems of Light Ga'ya. (2) Such mss were subjected to corrections by later naqdanim who provided the unvocalized words with the "lost" signs. However, sometimes the naqdan may have used a Vorlage, whose system of Ga'ya notation differed from that of the corrected ms. (3) The peculiarities which might have resulted from such a process could have taken root in some circles by the repeated copying of such mss. This seems to me the most plausible explanation for the text condition of the mss S 16 and P 1-3.

This preservation-tendency is demonstrated not only by the close similarity of the notation system exhibited by many Spanish mss to that of A or L, but also by the fact that we find Spanish mss which were written hundreds of years apart. Their selection of words with pata or zagef which were actually marked or unmarked with ga'ya are nevertheless almost identical. For example: in BM 2201 and BM 2626-8 written in 1246 and 1483 respectively, we find in Joshua 67 out of 74 words with pata in which the two mss are identical in their notation (both when the ga'ya is marked - 53 words, and when it is not marked - 14 words). Similarly, with the accent zagef: 71 out of 79 words in Joshua calling for a ga'ya are identically marked (or unmarked) in the two mss. These data clearly demonstrate exact and faithful transmission of selective systems by many generations of transmitters during the Middle Ages. Moreover, our findings show that even within the limits of a single system one should not interpret differences between earlier and later sources as a necessarily late development. In the realm of transmission we must allow for the possibility that the so-called late evidence may actually give testimony to earlier textual strata, which had been preserved by certain schools of transmitters. Variations between members of the same school could have been created quite soon after the invention of the system, and might be reflected in older as well as in later mss. Only thus can we account for the fact that the old ms A shows a more systematic form of ga'ya notation with the accent pata than the later mss, BM 2201 and BM 2626-8, whereas the later mss seem more systematic than A in respect to the accent zagef.

The work of Yequteil b. Yehuda has served as the principal source of information for all descriptions and discussions of the ga'ya during the later generations. The picture that he presented, or that was believed to have been presented by him, [38]
influenced directly or indirectly the formation of current theories. He employed two main classes of mss in formulating his rules of the light and the firm ga’yot: (1) local Ashkenazi mss, which he received from his predecessors; (2) Spanish mss, used by him because of their prestige. The Ashkenazi mss are not explicitly mentioned in his work, but their employment can be inferred from the rules of the light ga’ya which fit the systematic notation practiced in many Ashkenazi mss. The Spanish mss, on the other hand, are mentioned in his work several times, and one can sense his special regard for them. This fact led scholars incorrectly to think that he had used only Spanish mss for his work (see, e.g. I. Yeivin, in: Encyclopedia Biblica, V, [Jerusalem 1968],155). Such an assumption must be rejected on grounds of the evidence we have presented above. No Spanish ms could provide data for a systematic description of light ga’yot notation, as established by Yegutieli; this could be achieved only by consulting local Ashkenazi mss. His main reason for consulting the Spanish mss was the firm ga’ya, as shown by his following words (Gumperts, op. cit., 145 ff.): "...You will find them (the firm ga’yot) in all the outstanding Spanish mss, and I did not receive them from a teacher, but collected them from the utmost parts of reliable books...and I found the rules governing them etc." In a forthcoming study dealing with the firm ga’ya, I hope to show that one of the main differences between Ashkenazi and Spanish mss was, indeed, their practice of marking a firm ga’ya. Whereas in most Spanish mss the firm ga’ya was systematically marked in the great majority of the words calling for it, most of the Ashkenazi mss either lacked it entirely or used it selectively. The Spanish mss were, accordingly, the main source of information for Yegutieli upon which to formulate the rules of the firm ga’ya. However, as stated, he could not utilize them for his rules of the light ga’ya. This, it seems, needed some justification. For how could it happen that Spanish nagdanim, famous for their exact work, could produce such an incomplete work in realm of the light ga’ya? His explanation was as follows: "...and the custom practised by many not to mark them everywhere is due to their large number all over the Bible: the annotators argued that if they were to record them everywhere, their number would exceed that of the accents, and this might cause the readers to err, and consequently they would forget the accents because of the multitude of metigot (ga’yot). On the other hand, a wise man will acknowledge their existence even without actually seeing them, although the annotators permitted themselves not to
mark them all" (p. 141). Despite his justification for the practice in those mss, it seems that he himself was not satisfied with the situation, and took pains to establish a set of rules based on a systematic notation of the light ga'yon. However, this was not the result of speculation with the aim of systematizing incomplete ancient traditions, but rather of using a traditional system of marking ga'yon, practiced in Ashkenazi mss.

"The circumstances and causes leading to the formation of the various systems are an interesting problem in their own right, but cannot be discussed here. It requires independent research. Many factors needed for its clarification are still missing. It is reasonable to assume that the custom of public oral reading in the various communities played an important part in the formation of the different systems. However, we cannot overlook the possibility that considerations of systematization and schematization were also involved in the crystallization of systems in one school or another. Yet, this did not take place as a later development from a supposed single original system, but as synchronic processes within various schools during the formative period of the ga'ya notation (i.e., the last centuries of the first millenium). With regard to this, it should be pointed out that in early manuscripts with Tiberian-Palestinian punctuation there existed a relatively large number of ga'yon (e.g., V 2 and fragments from the Cairo Geniza, see: A. Díez-Macho, "A New List of So Called 'Ben-Naftali' Manuscripts", Hebrew and Semitic Studies Presented to G.R. Driver, ed. D. Winton Thomas, [Oxford 1963],16-52. It is possible that some systems of recording the light ga'ya developed in the same circles in which the Tiberian-Palestinian punctuation was invented, and that they reflect their reading and pronunciation practices. However, this supposition calls for a careful examination. Also among this type of mss there are some which do not record ga'yon (see ibid., p. 20, 3), and on the other hand, as we have seen, there are pure Tiberian mss which record a light ga'ya systematically.