DESIGNING THE TALMUD: THE ORIGINS OF THE PRINTED TALMUDIC PAGE

The Talmud is indisputably the most important and influential non-biblical Jewish work. Its redaction was completed at the beginning of the fifth century and the most important commentaries were written in the middle ages. Studied without interruption for a millennium and a half, it is surprising just how significant an effect the invention of printing, a relatively late occurrence, had upon the Talmud.

The ramifications of Gutenberg's invention are well known. One of the consequences not foreseen by the early practitioners of the "Holy Work" and commonly associated with the Industrial Revolution, was the introduction of standardization. The spread of printing meant that distinct scribal styles became generic fonts, erratic spellings became uniform and sequential numbering of pages became standard.

The first printed books (incunabula) were typeset copies of manuscripts, lacking pagination and often not uniform. As a result, incunabula share many characteristics with manuscripts, such as leaving a blank space for the first letter or word to be embellished with an ornamental woodcut, a colophon at the end of the work rather than a title page, and the use of signatures but no pagination. The Gutenberg Bibles, for example, were printed with blank spaces to be completed by calligraphers, accounting for the varying appearance of the surviving Bibles. Hebrew books, too, shared many features with manuscripts; A. M. Habermann writes that "Conat's type-faces were cast after his own handwriting . . . this is immediately obvious when his type-faces are compared to his manuscript writings."

Codices with a common text are, unless the scribe consciously intended otherwise, manifestly unique. Among the features that distinguish manuscripts from printed books is the absence of pagination, which is defined as "a: the numbers or marks used to indicate the sequence of pages (as of a book) b: the number and arrangement of pages or an indicator of these." Sequential numbering is used to permit multiple readers of a common work to reference their location.
within that work. Pagination is absent from codices, and, indeed, if present would be superfluous, because the very uniqueness of each codex renders such a reference system, based on the uniform physical construction of a book, meaningless. Instead, cross referencing is accomplished by referring to text markers, such as chapters and subheadings.

These features are also true of the Talmud. What makes the Talmud unique, however, among both Hebrew and Latin titles, is neither the existence of these conditions among codices and incunabula, nor the subsequent application of modern standards and methodologies to printed editions of the Talmud, but the adoption of a fixed pagination from which current editions may not deviate. Every student of the Talmud knows that the Talmud has fixed pagination, each tractate beginning at 2a, and an established page composition (tzurat ha-daf). This was not always the case. Well after the adoption of standards, variances occurred, with greater frequency and by more printers than might have been expected.

Scribes were not constrained by the need to adhere to either preset pagination or page composition. The physical placement of identical text is inconsistent, so that the same passage in two codices of a tractate could, and more often than not did, have a different number of lines to a page and words to a line, with the text beginning and ending at different positions on the page, resulting in varying numbers of leaves for two copies of the same tractate. Furthermore, the organization of the text varied, with all of the Mishnayot for a chapter sometimes placed at the beginning rather than distributed throughout the chapter. Where Mishnayot are distributed in a codex, they often are in a different order from the current sequence.

Codices of the Talmud were customarily written without any commentaries, those being separate books, although later manuscripts frequently include Rashi. The Talmud, unlike many works which are little changed in their printed forms from their manuscript predecessors, was physically transformed by printing.

The first dated Hebrew book to be printed was Rashi’s commentary on the Torah, completed on 10 Adar, 5235 (February 18, 1475) in Reggio di Calabria by Abraham ben Garton ben Isaac. Within a decade, the first tractate, Berakhot, had been printed in the year G’MRA (1483/84) by Joshua Solomon Soncino, in the northern Italian town of Soncino. Berakhot was quickly followed by Betza, and, in the ensuing decades, additional tractates were issued from the presses of Joshua Solomon and, in even greater number, his nephew, Gershom Soncino. These incunabula and post-incunabula tractates are remarkable, apart

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from the quality of their text and physical attractiveness, because of the commentaries the Soncinos included with the text and their arrangement of those commentaries.

The text, Rashi, and Tosafot are printed together on the same page, with the text in the middle of the page, Rashi on the inner margin towards the binding, and Tosafot along the outer margin of the page. Throughout the volume, Rashi and Tosafot begin at the top of the page, and four lines below begins the text. The text is printed in square letters, while Rashi and Tosafot are in semi-cursive script. With rare exceptions, subsequent additions of the Talmud have adhered to the arrangement, selection of commentaries, and structure initiated by Joshua Solomon Soncino. While there are instances where Rashi and Tosafot intermittently occupy more than four lines above the text in individual Soncino and occasional Bomberg tractates (first edition only), this arrangement has become part of the standard rules of composition of the Talmud (except where it is not possible due to the absence or limitedness of a commentary for a particular text).

Of greater significance, however, is the selection of Tosafot to be printed with the text. On the title page of the Mikhtol Yoft (Constantinople, 1532-34) Gershom Soncino recounts how, many years earlier, he had travelled throughout “France, Chambéry and Geneva” seeking the Tosafot of Touques, from whom he was descended. Many commentators have observed that what are now considered “our Tosafot,” as opposed to those Tosafot printed apart from the Talmudic text or still in manuscript, results from the selection of Tosafot by the Soncinos to be printed with the text.5

Soncino tractates lacked a title page. In its place, the first treatises, in the same manner as other incunabula, were bound with a blank leaf, which was counted as the first page in the enumeration of the signatures. The following page, the second page in the volume and the first text page, is therefore the second page of the quire. When Gershom Soncino printed Yevamot in 1509, the first tractate with a title page (he also printed the first Hebrew book with a title page, the Sefer ha-Roke'ah, in Fano, 1505), he counted the title page as the first signature. This numeration was continued in the subsequent Pesaro treatises; it is responsible for the practice, which carries over to the pagination in the Bomberg Talmud, of the title page being counted as not only the first leaf in the signature, but also the first page in the enumeration of the pagination, with the result that the first text page of a tractate is numbered 2a.

In 1519/20 Daniel Bomberg, the most prominent Hebrew printer
in Venice, the international center of printing in the sixteenth century, with Hiyya Meir bar David as his editor, began printing the first complete Talmud, the *editio princeps*, utilizing the layout introduced by the Soncinos. This Talmud is of considerable importance in the development of standards for future Talmud editions. The text organization and pagination of Bomberg’s *editio princeps* are the model and touchstone for subsequent editions of the Talmud. Only Berakhot follows the second Bomberg Talmud (sixty four pages for the text) rather than the first Bomberg *Berakhot* (sixty eight pages for the text). Two tractates from the last Bomberg Talmud, *Eruvin* and *Keritot*, have an innovation that was not repeated, a letter marker to cross-reference the text and *Tosafot*.

Two additional editions of the Talmud were printed in Italy. The first, a complete Talmud published by Marco Antonio Giustiniani from 1546-51, is a beautiful and influential edition, which contributed the indices *Torah Or*, *Ein Mishpat Ner Mitzvah*, and *Mesorat ha-Talmud* (now referred to as *Mesorat ha-Shas*), prepared by the editor, Joshua ben Simon Baruch Boaz.

The final Italian printing occurred in 1554 at the Sabbioneta press of Tobias ben Eliezer Foa. One tractate only, *Kiddushin*, is extant, if indeed more were ever printed. Here too, the editor was Joshua Boaz. He appended to the margins of the now standard page with indices the commentaries of R. Yom Tov ibn Abraham (Ritba) and the *Tosafot* of Isaiah di Trani. Accents were added to the letters in the Mishna, and references to the Mishna in the Talmud text were printed in large letters. Rabbinovicz described this edition of *Kiddushin* as “most becoming and beautiful... It would have been the glory and most beautiful jewel of Israel. All the editions before and after would not have compared to it.”

Hebrew printing in Italy, excluding undated books attributed to a press in Rome ca. 1470, antedates the appearance of Hebrew titles in the Iberian peninsula by one year only, the first Iberian work known with surety being, as in Italy, *Rashi* on the Torah, printed in Guadalajara and dated 16 Elul, 5236 (September 5, 1476). During the brief period left to the Jews of Spain prior to their expulsion from that land, Hebrew-Iberian presses issued many fine imprints, among them talmudic tractates, which were contemporaneous to and may even have preceded the first Soncino imprints.

Among the imprints from an unidentified press is an edition of *Hullin*, remarkable for its lack of any commentaries. An early date is ascribed to this edition due to its similarity to codex tractates.

The Guadalajara press of Solomon ben Moses haLevi Alkabetz, the eponymous grandfather of the author of *Lekha Dodi*, issued a num-
ber of tractates. Printed with Rashi but not Tosafot, these tractates are representative of the Sephardic tradition of learning Rashi and the novellae of R. Moses ben Nahman (Ramban) rather than Tosafot. Here too, the text is in square letters, and Rashi is in a distinctive Sephardic cursive script. In what is assumed to be the first Guadalajara tractate, Berakhot, Rashi is printed on the left side of the page, dividing the text. In subsequent tractates, Rashi is positioned along the outer margin, so that it surrounds the text. There is no pagination in these treatises.

Hebrew printing in Portugal, introduced into that country in 1486-87 from Spain, precedes Latin and vernacular printing, which begin in 1494 and 1495, respectively. Two treatises, Berakhot and Gittin, were printed in Faro by Don Samuel Gacon and Don Samuel Porteira, and Shavuot and Bava Metzia at an unidentified printing-house. Both the text and Rashi are printed in square letters, distinguishable by the smaller fonts used for Rashi. At one time, it was believed that these treatises had all been issued by the same press. Distinctions such as the use of different size fonts, catchwords, and the representation of the tetragrammaton have caused a reevaluation of that position. The placement of Mishnayot in both the Guadalajara and Portuguese tractates varies from the current order. These tractates, as well as other Sephardic treatises, are significant for textual variations from standard Talmud editions.

The expulsion of the Jews from Spain and Portugal resulted in the establishment of Hebrew presses in many lands with no prior history of printing, and in many cases no subsequent history of printing in the vernacular for many years (Hebrew printing in Constantinople antedates Turkish printing by more than two centuries.) In three locations, the Jewish refugees from the Iberian peninsula printed volumes from the Talmud notable for our purposes for their departure from the Venetian standard. These centers are Fez, Salonika, and Constantinople.

Samuel ben Isaac Nenedot founded a Hebrew printing-house in Fez in ca. 1516. Among the titles issued by his press are several tractates, the most interesting being Rosh haShana, in which both the text and Rashi are printed entirely with semi-cursive ("Rashi") letters. It is assumed that this was done because of insufficient square letters to set the text. Although all the tractates attributed to the Nenedot press lack Tosafot and are clearly Sephardic imprints, the layout of a later tractate, Hullin, reflects the influence of the Soncino and Pesaro treatises. After issuing seven to fifteen titles in Fez, Nenedot ceased to print, primarily due to a Spanish prohibition on the sale of paper to the press.

The first tractates printed in Salonika by Don Judah Gedaliah con-
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tinue the Sephardic tradition described above. By the time Joseph Jabez began to print tractates in 1563, Tosafot were included together with Rashi on the page of the Talmud. Joseph Jabez did not, however, initially adopt the accepted pagination. The first three treatises printed by Jabez, Kiddushin, Ketubbot, and Bava Metzia, do not conform to the standard pagination. By the time the fourth tractate, Bava Kamma, was printed, Jabez had become aware of the advantages of standard pagination, and that tractate, as well as the remaining treatises printed by Joseph Jabez in Salonika, were printed in conformity with the standard introduced by Daniel Bomberg. This was not done without some expense, as smaller Rashi fonts were needed to have his pages agree with the ‘Venetian’ pagination.9

Subsequent Salonika Talmud imprints, issued as individual tractates by small presses for local use, did not always adhere to the now accepted standard. Berakhot and Gittin, printed by David Azubib in 1580, reflect the influence of Joseph Jabez’s first tractates, Berakhot having 76 pages and Gittin 106, in contrast to the respective accepted pagination of 64 and 90 pages. A later press, that of the brothers Solomon and Moses Shimon, printed a small number of treatises from 1610-20, again not in conformity with the accepted pagination. The Hebrew press of Abraham haGer printed three tractates between 1651 and 1655, while the press of Abraham ben Yedidah Gabbai printed at least five tractates between 1705 and 1707. None of these tractates adhere to the standard pagination. In 1758 and 1767/68, respectively, Betza and Berakhot were printed without Tosafot and with non-standard pagination (Betza has 36 pages and Berakhot has 101 pages) for the local Talmud Torah. Finally, Ketubbot and Bava Metzia are known to have been printed for the local Talmud Torah by Raphael Judah Kalai and Mordecai Nahman between 1774 and 1781. These treatises, too, vary from accepted norms.10

The widespread adoption of printing Tosafot as well as Rashi is reflected in the earliest known Constantinople imprints, dated to the first decade of the sixteenth century. These tractates, although designed primarily for a Sephardic audience, reflect the Ashkenazic tradition of printing Tosafot, motivated by market considerations. In 1583, the Jabez brothers, Joseph and Solomon, began to print the Talmud in Constantinople, using the first Bomberg Talmud as their model. This is clear from a comparison of those two editions with later treatises. The Constantinople Talmud varies from editions printed afterwards, as does the first Bomberg Talmud, in such instances as the number of lines of Rashi or Tosafot at the top of the page. The Jabez brothers employed a
type that was larger than the fonts used by Bomberg. As a result, they
found it necessary to compensate for the additional space required by
their type by cramping the text and using abbreviations to ensure that
their pagination remained consistent with the accepted standard.\textsuperscript{11}

Acknowledgment of the 'Venetian' standard is evident in all of the
Talmud imprints from the Hebrew printing-houses of Lublin and
Cracow. Acknowledgment is not the same, however, as compliance. The
first printing of the Talmud in Poland is the Lublin edition of 1559-77.
The title page states:

The pages are marked in accordance with the great edition printed pre-
viously in Venice: In order to be able also to find the pages in this edi-
tion we have marked the [Venetian] pagination in our edition on the
side of the page in large square letters as in the great edition. That is,
where an \textit{aleph} is found on the side of the page, there begins \textit{daf aleph}
from the great edition and so with \textit{bet}, etc.\textsuperscript{12}

Although a smaller format was used for these tractates, a full size
font was employed. As a result, the pagination does not conform to the
\textit{editio princeps}. To compensate, the standard pagination is noted,
although not consistently, twice on a page, on the top of the page and
along the outer margin where a new leaf (\textit{daf}) begins according to
accepted usage. Only the leaf is noted, but not the page (\textit{amud}).

The acceptance of the great 'Venetian' standard is also evident
from the first Cracow tractates, \textit{Avoda Zara} and \textit{Ketubbot}, printed in
1578-79 in accordance with the first Bomberg Talmud. \textit{Avoda Zara}
was printed to complete the Basel Talmud which, under the guidance of
the censor, omitted the entire tractate from that Talmud. Although the
next Cracow Talmud, issued by Isaac Prostitz from 1602-05, also con-
formed to accepted practice, the following Prostitz edition deviated in
several particulars.

The 1616-20 Talmud edition was printed by Aaron and Mordecai
ben Isaac Prostitz as a small (20 cm.) portable edition. The title page of
\textit{Berakhot}, one of the few tractates printed with a title page, states:

Therefore, our purpose is to print the Talmud with \textit{Rashi}'s commen-
tary, small in size but of great quality. We have omitted \textit{Tosafot}, and in
its place added the \textit{Arukh}'s commentary throughout the Talmud. . . .
With references on the page to the great edition . . .\textsuperscript{13}

\textit{Tosafot}, as stated on the title page, is indeed absent. The \textit{Arukh}'s
explanation of terms, however, appears only intermittently throughout
this Talmud. The standard pagination is noted by large square letters throughout Seder Mo'ed, but is absent from most of the later tractates. The most unusual tractate in this edition, one that differs markedly from the other treatises, is Bava Metzia. That tractate was printed with the text only, lacking both Rashi and Tosafot. Bava Metzia too has its own pagination, noting the ‘Venetian’ pagination within the text in parenthesis.¹⁴

The last printing of a talmudic treatise in Poland prior to the catastrophic Chmielnicki massacres of 1648-49 was begun but not completed in Lublin. Unlike the 1617-39 Lublin Talmud, which conforms to the accepted standard, Bava Kamma, begun in that city in 1646, does not adhere to that pagination, and includes the same statement on the title page as to cross-referencing to “the great edition printed previously in Venice” as does the first Lublin Talmud. Before the tractate could be completed, however, a fire destroyed the Jaffe Hebrew printing house, forcing the famed press to close. Sixteen quires of Bava Kamma which had already been printed were saved and sold to the Cracow printer Nahum Meisels, who completed the tractate at his press.

In the remainder of the tractate, Meisels printed all biblical verses in the text with vowels. He must have anticipated opposition to this innovation, for Meisels began the seventeenth quire, his first, with a long defense of his innovation. Although Meisels hoped to print a complete Talmud, the suffering and impoverishment of Polish Jewry also affected the Hebrew printing houses, and no further tractates were issued.

By the beginning of the eighteenth century, the layout of the talmudic page and its pagination appeared to be settled. All printers of new editions of the Talmud and individual tractates had to either adhere to accepted standards or structure their modifications so that their imprints were, in some manner, consistent with the now accepted pagination. The constraints of an established standard, however, became evident at the beginning of that century.

In 1697-99, the Talmud was printed in Frankfurt on the Oder at the press of Michael Gottshalk, under sponsorship of Issachar haLevi Berman. This was the first Talmud to be issued with approbations, one which specifically forbade the publication of rival editions, including individual tractates. The prohibition encompasses printing the Talmud in any form, as one approbation states:

. . . whether in its entirety or in part, even for one tractate only, whether for oneself or for others, and it is not to be done by means of guile or ruse.
Rabbinovicz notes the chilling effect of these licenses, which, although well intentioned, caused serious disputes and resulted in the Talmud’s being printed less frequently. In this case, the civil authorities, elector Friedreich Augustus and Kaiser Leopold, granted a license for twelve years, while the rabbinic authorities issued approbations for twenty years.

Although the prohibition extended to individual tractates, ‘yeshiva’ editions continued to be issued. Approximately one hundred individual tractates were issued during the first half of the eighteenth century alone. These ostensibly prohibited individual tractates satisfied the clear and obvious need of students or less affluent individuals who could not afford an entire Talmud.

In many cases, the prohibition appears to have simply been ignored. In 1721, the Offenbach printer of tractate Sanhedrin was granted permission by R. Jacob haKohen, Av Bet Din (head of the rabbinical court) at Frankfort on the Main, to print the tractate for the reasons noted above. The formal basis of the exemption, however, was that by omitting commentaries normally appended to tractates, that is, Piskei haRosh and Rambam’s Mishnayot commentary, this edition would not be called a tractate but a kunteres (pamphlet). Nahum Rakover writes, however, that in fact the excluded commentaries were printed. The copy I examined did not include either of the excluded works.

Another way of circumventing the prohibition on printing individual treatises was to print tractates in a smaller format. Approximately fifty percent of the individual treatises issued during the first half of the eighteenth century were either small format quarto or octavo editions, rather than the folio size volumes associated with complete Talmud editions, with a standard page (amud) often covering two pages (double pages). The numeration of the pages remained unchanged, the top of the page repeating the leaf number and page number, thus retaining the accepted pagination. These small tractates generally measured between 16-21 cm., frequently towards the lower end of this range.

The rationale behind these small tractates was expressed in an approbation to the 1770 edition of Nidda, printed by Moses May in Metz, which states that although the approbations and excommunications issued extended to the printing of individual tractates, in reality “it was not their [the rabbinical authorities] intent to prevent the printing of these small volumes which were not part of complete editions.”

In at least two locations, the standard pagination was abandoned, reverting to the practice described earlier of only noting that numer-
tion in the text. This occurred at the printing-houses of Zevi Hirsch ben Hayyim, who printed in Wilhermsdorf from 1712 to 1739 and afterwards in Fuerth until 1753. Zevi Hirsch issued both folio and small format tractates, eschewing, in the latter instances, the use of double pages, noting instead the standard pagination at the top of the page and in the text where the new page begins. In tractate Sanhedrin (Fuerth, 1739) the volume ends on 264b, in contrast to 113b in the standard pagination.\footnote{Another innovation in these small tractates is the addition of the halakhic novellae of R. Samuel Edels (Maharsha) to the text page. This commentary was printed in many of the smaller volumes into the nineteenth century, and even appears with the text of some folio tractates.}

The most unusual tractate issued in the eighteenth century is a small edition of Sukka—it fits comfortably into the palm of one’s hand—which measures approximately 9 cm. The title page of this palm-sized edition of Sukka states:

Done as a small volume in order that a person should be able to carry it in his bosom, so that it should be fluent in the mouth of all Israel, to keep and to make a sukkah as is the law:\footnote{Apart from its small size, the tractate is notable for the absence of any commentaries. Standard pagination is noted at the top of the recto of a leaf (amud a) and in the text, in which case the page (amud) is also noted. Dated 1722, it lacks the place of printing and the name of the printer. Bibliographers have assigned it to different printing-houses, but most describe it as a Frankfurt on the Oder and/or Berlin imprint.\footnote{The only important exception is Rabbinovicz, who suggests a Halle origin, but this seems improbable.}}

In the nineteenth century, new marginal annotations were appended to the text in a number of Talmud editions. It was not until the 1880-86 ‘Vilna Shas,’ however, printed at the press of the Widow and the Brothers Romm, under the direction of Samuel Shraga Feigensohn, that significant additions were made to both the tractate volume and the now traditional Talmud page. Numerous commentaries were added for each treatise, among them Rav Alfius, which had previously been printed as a large separate work, and the margins of the page were filled with important glosses. A complete Talmud here consists of twenty oversized volumes, in contrast to the Bomberg and most subsequent Talmud editions, which were bound in twelve volumes. This Talmud is
now the accepted standard. Nevertheless, the accepted Talmud page remains essentially unchanged from Talmud editions printed in Italy in the first half of the sixteenth century.

The face of the Talmud was established in Italy beginning with Joshua Solomon's edition of Berakhot, continued by Gershom Soncino in his many Pesaro tractates and Daniel Bomberg in the editio princeps, and completed with the Giustiniani edition. Although additional commentaries and annotative material were added, the form, structure, basic commentaries, and pagination were all in place. Alternative structures and pagination were considered, but, with rare exceptions, by the seventeenth century, even these non-normative editions had to acknowledge the existence of the 'Venetian standard' for Talmud imprints.

There is no necessity in the composition of the contemporary talmudic page, which was first composed in the late fifteenth century. Its acceptance may be attributed to the influence of the Soncinos, the adoption of their layout by Daniel Bomberg, and the failure of alternate models to be widely accepted, partially due to the unfortunate circumstances of the Jews in the Iberian peninsula. The acceptance of this format, however, must also be attributed to the aesthetic and functional qualities of the talmudic page introduced by Joshua Solomon Soncino in 1483/4 in the small Italian town of Soncino, a format that utilized the potential of the printing press to modify the manuscript talmudic page, and thereby benefitted countless generations of Jews.

NOTES

1. All talmudic references are to the Babylonian Talmud. Although the invention of printing also affected the Jerusalem Talmud, the history of that work is not addressed by this paper.
11. Rabbinovicz, p. 73.
15. Rabbinovicz, pp. 100 and 155-56.
16. The rabbinic authorities were R. Naftali ha-Cohen, Av Bet Din of Pozna, R. Joseph Samuel of Cracow, Av Bet Din of Frankfurt on the Main, R. David Oppenheim, Av Bet Din of Nikolsburg, and R. Moses Judah ha-Cohen and R. Jacob Sasportas of Amsterdam.