It All Adds Up: Chronograms in Hebrew Books  
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**Description:** Chronograms are often used as a dating method for classical Hebrew books. They are constructed from a phrase or biblical verse which yields a numerical value when the letters are added up. They are meant to yield a year, but often, also give another message. They often reveal the author’s name, messianic hope, or a quotation from the Bible that is relevant to the topic of the book. The mathematics are not always so easy to compute: sometimes the cataloger has to count only certain letters, and sometimes s/he has to know which ones to subtract. We come across these every day in our cataloging, in both rare books and in recent publications. This paper will discuss the way in which chronograms are presented and how they can be useful to catalogers.

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A chronogram is an inscription, sentence, or phrase in which certain letters express a date or epoch, the English word derives from the Greek words chronos, “time” and gramma, “letter” and so means “time writing.” Chronograms have been reported in Hindu-Buddhist tradition and in the Roman Empire and were particularly popular during the Renaissance, especially on tombstones and foundation stones.

Here is an example of an inscription in stone from Czech Republic that spells out a Latin chronogram for 1729 [Slide 2]. Chronograms can be constructed in English with letters that add up as Roman numerals. [Slide]
For example, in a work entitled *Hugo Grotius his Sophompaneas*, published in 1652, the date is spelled out by the author's name: *FranCIs GoLDsMith*, MDCLII = 1652. *My Day Closed Is In Immortality* is a chronogram commemorating the death of Queen Elizabeth I of England.

[Slide 4] The capitals read MDCIII, which corresponds to 1603, the year of Elizabeth's death.

[Slide 5] In 1882 James Hilton published his book entitled: *Chronograms, 5000 and more in number, excerpted out of various authors and collected at many places*. He noted a curious tract in the British Museum that is a dialogue of over 60 Latin verses, each one of which adds up to 1689. Hilton's book dates itself by this chronogram: "An eXCeLLent neVV book of ChronograMs gathereD together & noVV set forth by I. HILTON = 1882."

Hebrew letters have an advantage in that all of them have numerical values. The earliest chronogram in Jewish literature is one found in a Hebrew poem of 1205 by Yehudah al-Harizi. Beginning in the 1300s, chronograms occurred in the epitaphs of European Jews, a very small percentage in Germany but more in Bohemia [in today's Czech Republic] and Poland. The inscription usually is equivalent to the year of death. In the
14th century, chronograms migrated from epitaphs to manuscripts and, later, printed books.

The great popularity of chronograms in Jewish tradition may be explained by their use in the Jewish mystical practice of gematria. In gematria, words with identical numerical values bear some relationship to each other or to the number itself. Verses of the Bible, or sentences from other books, having some reference to the contents or title of the book, or to the name of the author, publisher, printer, etc., were used. When the phrase contained too many letters to express the requisite number, those letters that were to be added up had to be distinguished by dots, lines, or a different typeface. Sometimes authors or typographers liked to create intricate chronograms that challenge the reader to decipher them.

(Many important years in Jewish history are indicated by their respective chronograms; e.g., Abravanel’s Introduction to his Commentary on Kings refers to the year 1492 by מזרה ["scatterer" = 252, after Jer. 31:9, mezareh Yisrael yekabtsenu, God, the scatterer of Israel, will yet gather the people together].)

Chronograms fall into several categories that are connected in different ways to the various titles. Some are connected to the contents of the work.
CONTENTS OF THE WORK

The Soncino edition of the Talmud has for its date the earliest printed chronogram, גמרא ("Gemara") = 244 = 1484).

Marvin Heller in his work Printing the Talmud: Complete editions, tractates, and other works and the associated presses from the mid-17th century through the 18th century, Leiden, Boston: Brill 2019, p. 236) notes that the Frankfurt am Main edition of the Talmud published between 1720 and 1722 and its subsequent reprints had chronograms expressing the dates for each tractate:

**Sotah** uses the biblical quotation, “but is clean; then she shall be free, and shall conceive seed ונקתה ונזרה זרע [Num. 5:28] (563 = 1803) יְנִיצְרֵאתּ הָזֶּרֶד, referring to the Sotah, a woman accused of adultery who passes the test and is cleared of the accusation, and so is rewarded by becoming pregnant.

**Avodah zarah:** “You shall have no other gods before me ולא יהיי לו אלהים [Ex. 20:3, Deut. 5:7] (561 = 1801) אחיוו על פנינו
Since the letters to be added up can be indicated by larger type or dots over the letters, the same quotations were sometimes used for different editions. For example, we have:

[Slide 6] **Bekhorot** from the Frankfurt am Main edition (originally 1720-22) with its chronogram, קדרש לי כל בכור, “Sanctify to me all the firstborn” adding up to 480 = 1720 and a later edition [Slide 7] using the same quotation but emphasizing different letters that adds up to 562, 1802. Keretot used the quotation וָלָא יִכְרָת כל בָּשָׁר “Nor shall all flesh be cut off” (Gen. 9:11) to express both 1720 [Slide 8] and the later edition of 1803 [Slide 9] by varying the letters to be added up.

“Sanctify to me all the firstborn” [Ex. 13:2] קִדְּשֵׁנִי לְכֶל בָּכֹר = 480 = 1720)

and Bekhorot based on the earlier edition:

“Sanctify to me all the firstborn” [Ex. 13:2] קִדְּשֵׁנִי לְכֶל בָּכֹר = 562 = 1802)

Keretot: “Nor shall all flesh be cut off וֹלָא יִכְרָת כל בָּשָׁר “Nor shall all flesh be cut off וֹלָא יִכְרָת כל בָּשָׁר [Gen. 9:11] = 480 = 1720)

“Nor shall all flesh be cut off וֹלָא יִכְרָת כל בָּשָׁר [Gen. 9:11] = 563 = 1803)
Later translators into Latin, Spanish, Dutch and German were mostly by apostates or Christian Hebraists in the 17th and early 18th centuries. They use Roman numerals exclusively rather than chronograms. [Sometimes their aim was to prove Judaism false; others were Philo-semitic. In any case, they often preserved many Jewish texts by translating them.]

[Slides 10-11] quotation from Siddur has to do with contents: Sidduro shel Shabbat / Hayyim ben Solomon of Czernowitz (~1760-1816). Adding up all but two words gives year 1813. This quote is from Shabbat Mussaf “Those who savor it [the Sabbath] will merit life and also those who love the speech that befits it [i.e. speaking of spiritual matters rather than the mundane] have chosen greatness.” Note that this quotation from the paragraph that begins תוכנת שבת is itself part of a reverse alphabetic acrostic featuring the letters ב through ט.

[Slide 12] =_contents: The quotation is from the Haggadah and the emphasized word shirah is the essence of the Haggadah.

*Havineni ye-elmedah mitsyotekha:* “Give me understanding that I may learn Your Commandments.”

Some authors cleverly imbed the title of the work itself into the chronogram.

**TITLE**

[Slide 14] Maḥzor mi-kol ha-shanah, 1801. Uses the title word Maḥzor in the chronogram, Prov. 14:23: בְּכָל עֶצֶב יִהְּיֶה מוֹתָר וּדְּבַר שְׂפָתַיִם אַךְ - From all toil there is some gain, but idle chatter is pure loss. A play on words. \textit{maḥzor} and \textit{maḥsor}.

[Slide 15] Bet ha-Midrash א = 1853 (From the Baruch Strauss Collection at YU; stamp of Azriel Hildesheimer) Here the title itself spells out the year.

Here are three examples of the same title. Published in different years, they utilize different verses to create their chronograms:

[Slide 16-17] Sefer Yirah, Berlin, 1724. Compilation of 3 mystical works. Also mentions the letters in אריה=יראה \textit{in} it: שְׂפָתַיִם אַך - From all toil there is some gain, but idle chatter is pure loss. A play on words. \textit{maḥzor} and \textit{maḥsor}.
Deut 10:12: “And now, O Israel, what does the Lord your God demand of you? **Only this:** to revere the Lord your God, to walk only in his paths …

וְׂעַתָה יִשְׂרָאֵל מָה י״י אֱלֹקיךָ שֹׁאֵל מֵעִמָךְ כי אִם לִירָאה אֶת יי אלוקיך לכלת בכל דרכי
ולאなぜ אותי לועבד אית יי אלוקיך לכל לבך וכל נשך.

[Slide 18-19] Sefer Yirah, Ostraha, Ukraine, 1794, plays on the name יראה as having the same letters as אירה. Chronogram highlights the letters to be added up inואר חיים תוכחת מוסר emphasizing the mussar content of the work. The quotation is from Prov 6:23: “The way to life is the rebuke that disciplines,” however, the original uses the word דרך חיים.

[Slide 20] Sefer Yirah, perushe ma’amare Zohar. Be’ur Sefer Zohar. The title, the commentary on the Zohar, is reflected in the chronogram, emphasizes the explanatory nature of the work.

[Slide 21] Ma’ayan ha-Ḥayim. Title and chronogram agree: שנות “מעיין החיהם
ייתحكם” (תשע”ח)
DIFFICULT CHRONOGRAMS

[Slide 22] Sefer Be’er Mosheh, Moshe Serteln, a glossary of terms in Esther translated into Yiddish, כי הושיע ה'' משי''חו ידעתי שנט עתה = 1605. The quotation is from Ps. 20:7, but there is no indication which letters to add up. It turns out that the word ידעתי adds up to the year 1605. [“Now I know that H. has given his anointed victory” = goes with the theme of Esther]

[Slide 23] Sefer Be’er Mosheh on Five Scrolls. מ Goose וולוד = Mike-se, 1605, Prague. Written in the chronogram and in the line above it: שנת גשם ל"א" מ"ש班组 וולודה = 365 = 1605. Based on Prov 21:3 but not a direct quote. “To do what is right and just is more desired by the Lord than sacrifice.”

CREATOR

The chronogram may give a reference to the creator of the work:

For example, a work entitled Naḥalat Ya’akov, 1793, by Jacob Naumberg, printed in Fuerth has תנופ התמים העבר as its chronogram. So both the title and the chronogram refer to its author.
Me’ore Eli’ezer. The title page indicates that it was written by Rabi Mordekhai Eliezer Veber, *Zekher tsadik ye-kadosh li-verakhah le-ḥaye ha-olam ha-ba*, a.b.d. Ada (Serbia). Chronogram reads almost the same: "רבינו הגה"ק אבד"ק אדא זצוקללה"ה", 2007. The date also indicates the month of Shevat.

*She’elot u-teshuvot Zekan Aharon* has the chronogram: כשמן הטוב ... על הזכן זקן אהרן by Eliyah ben Binyamin ha-Levi. Here the connection is between the title mentioning Aharon as the first Levite and the author, who is also a Levi. תשע''ז = 777 = 2017. [Brought to my attention by Haim Gottschalk]

**EXPRESSION OF A CERTAIN SENTIMENT**

Sometimes a certain emotion is intended to be expressed:

Soncino employed chronograms ("rejoice ye!" = 1646), ("שמחה" = rejoice ye!"), ("יож" = שמחה, "1593), ("with rejoicing" = 1497) as an expression of joy at the completion of the printing.
MESSIANIC HOPE:

[Slide 27] Or ‘olam, 1938. The title page says that it was printed several times and now reprinted in this edition. Ps. 116:19, “In the courts of the house of the Lord in the midst of Jerusalem, Halleluyah!” The quotation refers to the “courts of the house of the Lord,” the Temple, which will be rebuilt at the dawn of the messianic era.


So we see that at the same time as the chronogram gives us the date, it may also connect us to the author or give other more subtle messages. While recent Israeli books on all subjects are likely to carry the year in secular terms, e.g. 2019, they are also likely to display a Hebrew year such as תשע”ט. But for Rabbinical literature, even in contemporary times, books might explicitly give the Hebrew year and yet still express the date in a chronogram.

I conclude with my own hope, that in these troubled times God should help us and answer us when we call:
ה' הושיע המלך יענה ביום קראנו = 2019.