

# The Hidden Birth Dates of Personalities of Genesis: The Data

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This document contains the detailed description of the construction of list  $L$ , sample  $S1$  and sample  $S2$ , which are described concisely in [1] (in Section 2 and in Section A.2 of the Appendix).

## List $L$

We wish to determine the dates of birth and death for personalities in the Book of Genesis. Such dates are not found in the text itself, but some of them are known from Talmudic sources. These dates may be found in several Talmudic sources, which occasionally conflict. According to guidelines set up in [2] for a similar situation, we proceeded as follows:

- 1st. Whenever several Talmudic sources (sometimes conflicting) exist for the desired data, we choose the one source, which gives more data than any of the others.
- 2nd. We use the critical editions of the chosen source text (i.e., emended by comparison with manuscripts, etc.).

Here, too, we followed the same procedure:

A. We obtain the most comprehensive Talmudic source for the desired information by implementing a computer survey using a CD of the *Bar Ilan Responsa Database* [3]. We scanned all the Talmudic period sources: *Mishna*, *Tosefta*, the minor tractates, *Talmud Bavli*, *Talmud Yerushalmi*, the *halachic midrashim*, the *aggadic midrashim*, and the *Zohar*. We searched for any statement which specified explicitly the date of birth (or creation) or death of any personality mentioned in Genesis. In this manner we found dates for several personalities - all of which were dates of birth (no explicit dates of death were given). We found out that:

1. Some sources provided birth dates for only a single personality: *Midrash Vayikra Rabba*, *Pesikta D'Rav Kahana*, and the *Zohar* all gave only the date

of the creation of Adam. The *Talmud Yerushalmi* and *Midrash Tanchuma* gave only Isaac's date of birth.

2. *Otzar Midrashim* lists the dates of birth of 10 personalities (10 of the sons of Jacob).
3. *Yalkut Shim'oni* gives dates for 13 personalities (Adam, Isaac and 11 of Jacob's sons).

Thus *Yalkut Shim'oni* is the most comprehensive of the sources.

B. We examined a critical edition of *Yalkut Shim'oni* [4], and found dates there for not 13, but 14 personalities: Adam, Isaac, and all 12 of Jacob's sons:

1. The date of Adam's creation is given in *Parashat Pinchas* 782.
2. The date of Isaac's birth is given in *Parashat Shemot* 172, and in *Parashat Bo* 210.
3. A list of birth dates for the sons of Jacob can be found in *Parashat Shemot* 162. (An identical list can be found in the commentary of Rabbeinu Bahya on the Torah; cf. note [5]). The dates are given below in Table 1.

List *L* consists of these 14 personalities.

### **Sample *SI***

Sample *SI* is a set of word pairs  $(w, w')$ , where  $w'$  is the name of one of the personalities, and  $w$  is his date of birth.

Some of the personalities have more than one name and/or spelling occurring in Genesis. In these cases  $w'$  is actually one of these variants.

The conventions followed for writing the dates are exactly as in [6]: each date is written in three fixed forms: ) T\$RY, B) T\$RY, ) BT\$RY [we use the Michigan-Clairmont scheme for transliterating Hebrew letters]. Thus  $w$  is one of these forms of the relevant date.

Table 1 shows all the variants of the names (in the order they appear in Genesis) and all the forms of the date.

**Table 1**

<i>Personality</i>	<i>Name</i>	<i>Date</i>
Adam	)DM	) T\$RY, B) T\$RY, ) BT\$RY.
Isaac	YCXQ	+W NYSN, B+W NYSN, +W BNYSN, YH NYSN, BYH NYSN, YH BNYSN.
Reuven	R)WBN	YD KSLW, BYD KSLW, YD BKSLW.
Shim'on	\$M(WN	K) +BT, BK) +BT, K) B+BT.
Levi	LWY	+Z NYSN, B+Z NYSN, +Z BNYSN, YW NYSN, BYW NYSN, YW BNYSN.
Yehuda	YHWDH	+W SYWN, B+W SYWN, +W BSYWN, YH SYWN, BYH SYWN, YH BSYWN.
Dan	DN	+ )LWL, B+ )LWL, + B)LWL.
Naftali	NPTLY	H T\$RY, BH T\$RY, H BT\$RY.
Gad	GD	Y X\$WN, BY X\$WN, Y BX\$WN.
Asher	)\$R	*K \$B+, BK \$B+, K B\$B+.
Yissachar	Y\$\$KR	*Y )B, *BY )B, *Y B)B.
Zevulun	ZBLWN, ZBWLN	Z T\$RY, BZ T\$RY, Z BT\$RY.
Yosef	YWSP, CPNT P(NX	) TMWZ, B) TMWZ, ) BTMWZ.
Binyamin	BN )WNY, BNYMYN, BNYMN	Y) X\$WN, BY) X\$WN, Y) BX\$WN.

This table presents sample *S1* in a concise form. The sample actually consists of pairs of expressions  $(w, w')$  in which  $w'$  is one of the names, and  $w$  is one of the forms of the date appearing in the same row.

In the experiment we look for ELS' spelling out  $w'$  and SL's spelling out  $w$ . Therefore, as in [1] (in Section A.2 of the Appendix), each expression  $w$  is restricted in length to the range 5-8 (as in [6]), while there is no need to restrict the expression  $w'$ .

Therefore, dates consisting of less than 5 letters are not included in the sample. These have been indicated in the table with an asterisk.

## **Sample S2**

Since we are dealing exclusively with dates of birth, it might be appropriate to examine only the names of the personalities as they are spelled in the story of their birth. This yields the Sample S2, which is summarized in Table 2.

**Table 2**

<i>Personality</i>	<i>Name</i>	<i>Date</i>
Adam	)DM	) T\$RY, B) T\$RY, ) BT\$RY.
Isaac	YCXQ	+W NYSN, B+W NYSN, +W BNYSN, YH NYSN, BYH NYSN, YH BNYSN.
Reuven	R)WBN	YD KSLW, BYD KSLW, YD BKSLW.
Shimon	\$M(WN	K) +BT, BK) +BT, K) B+BT.
Levi	LWY	+Z NYSN, B+Z NYSN, +Z BNYSN, YW NYSN, BYW NYSN, YW BNYSN.
Yehuda	YHWDH	+W SYWN, B+W SYWN, +W BSYWN, YH SYWN, BYH SYWN, YH BSYWN.
Dan	DN	+ )LWL, B+ )LWL, + B)LWL.
Naftali	NPTLY	H T\$RY, BH T\$RY, H BT\$RY.
Gad	GD	Y X\$WN, BY X\$WN, Y BX\$WN.
Asher	)\$R	*K \$B+, BK \$B+, K B\$B+.
Yissachar	Y\$\$KR	*Y )B, *BY )B, *Y B)B.
Zevulun	ZBLWN	Z T\$RY, BZ T\$RY, Z BT\$RY.
Yosef	YWSP	) TMWZ, B) TMWZ, ) BTMWZ.
Binyamin	BN )WNY, BNYMYN	Y) X\$WN, BY) X\$WN, Y) BX\$WN.

(Note that S2 differs in the omission of the three variants ZBWLN, CPNT P(NX and BNYMN.)

Here, also, dates with less than 5 letters have been indicated by an asterisk, and they are not included in the sample.

## References and notes

1. Witztum, D. (2005) *The Hidden Birth Dates of Personalities of Genesis*, preprint.
2. Witztum, D., Rips, E. and Rosenberg, Y. (1995) *Equidistant Letter Sequences in the Book of Genesis: II. The Relationship to the Text*, preprint, pg. 16.
3. Responsa Project, CD 5, Bar Ilan University, Ramat Gan, 1997.
4. R. Shim'on Hadarshan, *Yalkut Shim'oni, Shemot*, Oxford manuscript with textual variants from manuscripts and early editions, Heiman-Lehrer-Shiloni edition, Mosad Harav Kook, Jerusalem 1973.
5. Rabbeinu Bahya, *Commentary on the Torah*, emended from early editions and manuscripts by R. Chaim Dov Chavel, Mosad Harav Kook, Jerusalem 1982.
6. Witztum, D., Rips, E. and Rosenberg, Y. (1994) *Equidistant Letter Sequences in the Book of Genesis*, *Stat. Science*, 9, No. 3, 429-438.