

*This is a response to the article “Astounding Discoveries in War and Peace”, published on the internet in May ’97.*

## ***Did They Really Find Codes in War and Peace?***

FULL VERSION

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### **Summary**

Recently on Channel One Television in Israel, on the show “Popolitika”, as well as in other places, psychologist Professor Maya Bar Hillel claimed that she and her colleagues found “hidden codes” in the Hebrew translation of Tolstoy’s War and Peace. They claim that this finding is *the same type* of code that is found by code researchers in the Torah. The first example they presented was on the subject of Chanukah.

There is a fundamental difference between the serious scientific research that has been done on codes in the Torah, and the “War and Peace” example presented by this group. It is possible to distinguish between them like distinguishing counterfeit money from the real thing.

### **Introduction**

Scientific research into ELSs (Equidistant Letter Sequences) in the book of Genesis has been proceeding for some twelve years. The researchers have focused on two phenomena:

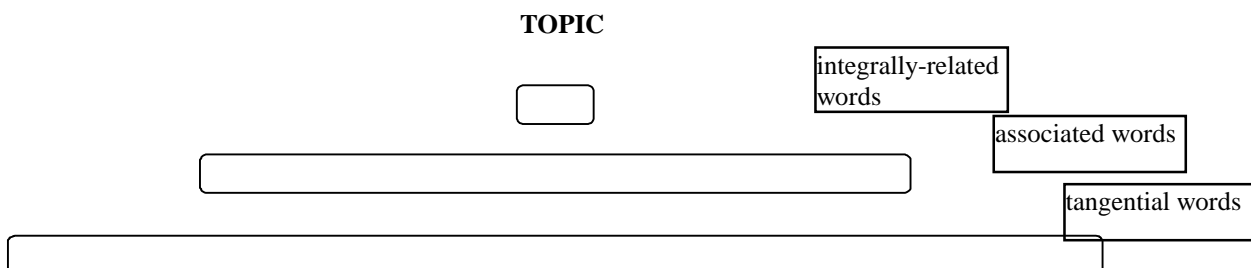
1. The close proximity of one minimal ELS to another, where there is a conceptual relationship between them (e.g. an ELS of “hammer” near an ELS of “anvil”).
2. The close proximity of a minimal ELS to a conceptually related expression in the text, as it is read consecutively (e.g. an ELS of “hammer” near the appearance of “anvil” in the text as a string of consecutive letters).

Please note that the researchers do not measure the probability for the appearance of any individual expression as an ELS. Rather, given two expressions appearing as ELSs, we measure whether their proximity is closer than may be expected to occur by chance.

### **Methodology**

After defining the phenomena to be investigated, the researchers then determined a rigorous method to measure the level of success: determining what was to be considered “in close proximity” and what was not. After establishing this methodology, the researchers were now able to conduct experiments to investigate the phenomena; to check if the proximities of such ELSs occur much more frequently in the text of Genesis than would be expected to by chance.

An “experiment” in this instance means examining the proximities between paired words of a specified set. For every “topic” there is a pool of expressions which are conceptually related. These can be represented schematically in the form of a pyramid:



At the top of the pyramid are just a relatively small number of the most important words and



of חנונו (“they rested”) and מאויביהם (“from their enemies”). The proximity of these ELSs was significant. I then marked the minimal ELS of the word חנונו which participated in this convergence, and checked whether it was also convergent with the phrase שביום כ”ה (“since on the 25th”). I also checked whether it was proximal to the words חנוכה and החנוכה. Investigation showed that *each* of these four convergences was significant, and the combined probability of occurring by chance is about one in a thousand. It also became clear from this experiment that the form החנוכה was by far the most successful, so I chose to use it for the continuation of the experiment.

In the second stage I decided to use an expression taken from the very top of the hierarchy of expressions related to Chanukah. The first expression which came to mind was the name of Judah the Maccabee, of the Hasmonean family. For example, in the *Encyclopedia Hebraica*, under the entry for “Chanukah”, he is the only member of the Jewish forces mentioned as the hero (as יהודה המכבי and as יהודה החשמונאי; Judah the Maccabee and Judah the Hasmonean). He is mentioned there not only as the chief military leader, leading the victory over the Greeks, but also as the one responsible for establishing the holiday of Chanukah. Not only are his name and appellations mentioned in the encyclopedia, they are on the lips of every Israeli toddler.

Using his name and appellations from this entry in the *Encyclopedia Hebraica*, I listed all of the possibilities for his appellations:

1. Judah the Hasmonean - יהודה החשמונאי
2. Hasmonean - חשמונאי
3. The Hasmonean - החשמונאי
4. Judah the Maccabee - יהודה המכבי
5. Maccabee - מכבי
6. The Maccabee - המכבי
7. Judah - יהודה

Of this list, only the following occur as ELSs in the text of Genesis:

1. Hasmonean - חשמונאי
2. Maccabee - מכבי
3. The Maccabee - המכבי
4. Judah - יהודה

The name יהודה is exceptional in this sample in that it is a common Jewish first name. If you were to mention the name "Yehudah" on a Jewish street, no one would have the faintest idea that you were referring to the star of the Chanukah story. This is not the case with the other appellations.

We decided therefore to investigate the three word pairs:

1. החנוכה - חשמונאי
2. החנוכה - מכבי
3. החנוכה - המכבי

### **The Results**

An experiment was performed searching for ELSs of these pairs. The combined probability for these three pairs (as calculated according to the procedures described in the above articles) is 1/700,000.

It is important to emphasize that the decision whether or not to utilize the word "יהודה" was not a difficult one. There are, after all, only two choices. The critical reader is at liberty to double the probability to 1 in 350,000.

### **“Chanukah Codes” in War and Peace**

Research into hidden codes in Genesis has attracted the attention of two different groups of people, who have consequently become involved in the field. There are those who want to make money and/or to promote their own interests through the codes. This group is uninterested in the credibility and the scientific basis for the phenomenon.



At this point, lobbyists from the other bomb manufacturers try to intervene. They claim that ordinary bombs can achieve just as good results. To prove their claim they present a document reporting tests which were run using ordinary bombs. They lay before the members of the subcommittee a large photograph with an accompanying diagram on which many strikes have been indicated. "Here!" say the lobbyists for the ordinary bomb makers, "You see that the ordinary bombs were no less accurate than the "smart" bombs! There are no less than 59 bombs that landed near the target!"

The members of the subcommittee examine the photographs and the accompanying diagram, and compare them with the documents presented by the manufacturers of the "smart" bomb. They notice immediately that there is a big difference between the two presentations: In the tests done by "Alpha" the strikes were within a 10 meter radius of the target. On the other hand, the documents of the other lobby cover a much larger area, with a radius of a 1000 meters, in which there are a number of individual targets, but the strikes are not particularly close to these targets.

The members of the subcommittee request one additional piece of critical information: How many bombs struck outside of the target area?

The lobbyists hem and haw, and reply that they do not have that information.

"If so," says the chairman of the subcommittee, "What claim do you have at all? Of course when you have such a large target area some of the bombs are going to fall inside of it! The comparison you have made is nothing but a fraud!"

As we have seen above, the researchers working on the hidden codes in the book of Genesis have proceeded like the scientists of the "Alpha Company." The number of expressions in the experiment, corresponds to the number of "bombs" in our analogy. The parallel to having the bombs manufactured under objective supervision consists of choosing a set of word pairs which forms an objectively closed sample. We have already discussed the ways in which this can be accomplished.

We now proceed to the regular "bombs" manufactured by the competition.

#### **A. Huge Area of the Target**

Dr. McKay et al. proceeded in the same manner as the "lobbyists" in our analogy. In contrast to the compactness of the proximities which we presented relating to the topic of "Chanukah", McKay et al. used an enormous array consisting of 14,719 letters, which comprises about 20% of the entire text!

Of course, it is only to be expected that about 20% of the expressions tested for should land within such an enormous area.

#### **B. Laxness in the List of Expressions**

A close examination of the list of expressions which these researchers report having found reveals certain peculiarities. (We will use the following convention: We will rank the ELSs of a particular expression according to the size of the skips between letters. The ELS with the shortest skip in the entire text will be termed the "most minimum." The next smallest ELS will be called the "second most minimum" and the one after - the "third most minimum," etc.):

1. McKay et al.'s claim to have found 41 different expressions, each at its most minimal appearance or as consecutive letters. Some of these appear more than once, yielding 59 total hits.

2. The word list they supply in English. When one tries to deduce what words they correspond to in the Hebrew text, one runs into difficulties, as we discovered when we tried to replicate their experiment. For example:

- They list the expression "Greek army." The Hebrew equivalent, אַרְמֵי יוֹון, does not appear in the target segment. They seem to have had in mind the expression אַרְמֵי יוֹון, which does appear in its most minimum form in the segment.

- The expression “Hashmonai,” which is written in Hebrew חשמונאי, does not appear in the segment at all.
- “Modi’in” is written in Hebrew מודיעין in Hebrew. This word does not appear in the segment. We thought perhaps they had used the nonstandard spelling, מודיעים, but this form also does not appear in the segment.
- “Pure oil” (as it relates to the topic of “Chanukah”) translates as שמן טהור. This expression does not appear in the segment.
- “Maccabees” is written in Hebrew מַכַּבִּי. The minimum of מַכַּבִּי does not appear here. This expression appears in the segment only in its eighth most minimum form! After additional investigation, we guessed that they were referring to the expression הַמַּכַּבִּי (the Maccabees), with the definite article. And indeed, the minimum form of this word does appear.
- “Praise” is the translation of the word הַלֵּל. This short word appears in its most minimum form 76 times in the text, 14 of which are in this segment, just as one would expect to occur by chance. Therefore we thought that perhaps they had in mind the expression הַהֵלֵל (the praise) with the definite article. However, this form appears 6 times in the text, only one of which is in this segment.
- Of course, the most fundamental expression related to this topic is the word “Chanukah” itself. The minimum of חַנּוּכָה does not appear here. We looked for the word חַנּוּכָה in the segment, and it appears only in its seventh most minimum form. By now our experience had taught us to try adding the definite article, but written this way we found the word only in its 13th most minimum form! It then occurred to us that perhaps they were referring to an appearance of the word as consecutive letters in the text. And indeed, חַנּוּכָה does appear in its consecutive form.

If we spell the word “Chanukah” in its alternative form, חַנּוּכָה, we find that it does appear as a minimum. (The spelling חַנּוּכָה appears in the segment in its fifth most minimum form).

- “Chanukiya” is written in Hebrew either חַנּוּכִיָּה or חַנּוּכִיָּה. Since on the table which they supplied it appears that they used both forms, we looked for both forms. חַנּוּכִיָּה appears only in its second most minimum form, as does the spelling חַנּוּכִיָּה. With the addition of the definite article, חַנּוּכִיָּה does indeed appear in its most minimum form, but חַנּוּכִיָּה only appears in its third most minimum form.
- “Torah” appears in this segment only in its 15th most minimum form. As consecutive letters in the text only one of its three appearances landed in the target segment. With the definite article it appears only in its 13th most minimum form.
- “Miracles” translates into מִוִּסִּים in Hebrew. We were only able to find it in its seventh most minimum form. We thought that here too they had used the definite article, but מִוִּסִּים only appears in its ninth most minimum form. We thought of looking for the word in its consecutive form, and indeed we did find one such appearance, but unfortunately it was outside of the target segment. Only afterwards, when we consulted their own table did we discover that they had spelled the word - "מִוִּסִּים" (the addition of the first "י" is a convention to facilitate reading without diacritical marks)!
- A “spinning top” is a טוֹבִיבּוֹן in Hebrew. This word does not appear at all in the segment. It was later discovered that they had used the word "dreidel", which isn't even Hebrew, it's Yiddish!

Let us summarize what can be learned from the preceding section:

McKay et al. must have investigated at least the following possibilities for each of their 59 words:

- \* The word as it is written in its "full" form, i.e. with the inclusion of the vowels "ו" and "י"

- \* The word as it is written using it's vowelized spelling form ('ktiv dikduki').
- \* With the definite article ("ה")
- \* Without the definite article ("ה")
- \* Non-Hebrew forms of the word (e.g. "dreidel")

Each of these possibilities was searched for twice: once as an ELS and then again as consecutive letters in the text. In all, 10 different possibilities for each word.

Even if their list really represented an *a priori* list of expressions relating to the topic of Chanukah (which we will soon see it does not), and even if there were only five different possibilities for each word instead of 10, we would still expect to receive results similar to the ones they observed purely as a result of chance, because the probability of hitting within such a large target area, comprising a fifth of the text, is of course one in five.

Moreover, we have learned that the report which was publicized contained inaccuracies, and that some of the words reported are not to be found at all!

### **The Real Results**

In order to demonstrate just how critical the size of the target segment is, and just how critical it is to use a precise methodology for measuring proximities, we ran the following test. Our measurements were made using the methodology outlined in the above-mentioned papers. McKay et al. are familiar with it, and they know how to use it:

We mentioned in section 2 that within the enormous area of the table used by the researchers there were two possible "targets" - the two occurrences of the main topic, "Chanukah." The spelling חנוכה appears as an ELS, and the spelling חנוכה appears as consecutive letters in the text. If the associations are genuine, then the related words should converge around these two targets.

We carried out two test "bombings", where the arsenal of "bombs" consisted of exactly the words the researchers had marked off on their table. In one test we "bombed" the word "חנוכה." The combined results were just what one would expect to happen by chance. In the second test we "bombed" the word "חנוכה" with the same bombs. Once again the results were totally random.

The proximities they show around the word חנוכה or חנוכה are expected to occur by chance on every other page of your local newspaper.

### **C. Further Errors**

By all rights, we could end our critique here. But if we examine the way they chose their expressions, we can see that the situation is even more grave:

McKay et al. quoted translations from (primarily) three Hebrew sources. They indicated in bold type the words which they considered to be the most important ones.

- One can see right away that they chose to mark off only a small selection of words. Among those which they have ignored are some of the most central ones related to Chanukah. For example the name Matthias (מתתיהו).
- Even more surprising is the fact that they did not even use all of the expressions which they themselves marked off! They seem to have "forgotten" the words: "priests", "king", "Greek kings", "High Priest", and others. On the other hand, among the list of words which they marked off in the segment of the text, there are more than 10 which are not marked in the sources. The explanation is simple: the expressions which they "forgot" are the ones which failed to show up in the target segment!
- But that is not all: The innocent reader is lead to believe that the expressions which they did find in the segment are the same as those which appear in the original Hebrew sources from which the word list was compiled. This is in fact not true. They retranslated the words back into Hebrew arbitrarily to fit

the words found in the target segment!

In one instance, they went even one step further. *They actually changed an original text of the Talmud.* Instead of the phrase “..and only found but one vessel of oil”, they changed the source to read “..and they found but one small **pure** vessel of oil.” Why the change? Very simple-- they needed the expression ‘pure vessel’, because they knew that it appeared in their segment of the text!

Naturally, we would like to believe that all of this happened as the result of innocent errors, but the document produced by McKay et al. should at least serve as warning to all to be wary of charlatans.

What is clear from our analysis is that one has to check any claimed results carefully: scientific analysis allows us to distinguish between what is real and what is counterfeit.