

C D G H J M N H C V B M N E F D TORAH CODES REVISITED D V B N M H J M K L Z X C D S Y T D S

We received many letters in response to our interview with Torah Codes researcher Harold Gans (fall 2007). Here is a sampling of the letters. Ed.

With regard to “Up Close with Torah Codes Researcher Harold Gans,” I have two objections. Hypothesis testing is a well-developed branch of statistics. I can’t believe that designing and executing an appropriate hypothesis testing procedure for Torah Codes is too hard for competent mathematicians and statisticians. Indeed, from scanning the literature it’s clear that scientific investigation has been replaced by name-calling and charges of *apikorsut*.

But what has turned me off so completely is that the Codes are *independent of the content of the Torah*. If a laundry list were to produce Codes like these, would we then have to reverse the laundry list?

Murray Schechter
Allentown, Pennsylvania

This morning during *Selichot*, I read of a *migdal* (tower) and, on the opposite page, I saw the word “twin.” Does this refer to the events of September 11th? I’m sure it doesn’t.

I’m not a mathematician. I cannot evaluate the odds of finding any particular thread in the Torah. But I cringe at the idea that Hashem would use His holy scroll to cleverly include mention of particular historic events or even of people who are, in the long run, of no theological consequence. It is depressing to see the Torah turned into a party game or cosmic code book.

Richard A. Rosen, MD
Mount Vernon, New York

The interview with Harold Gans paints a rather one-sided picture of this controversial topic. A few comments might bring some balance to the discussion:

1. Gans dismisses the Codes opponents as being “mathematicians [who] take as their starting point the firm conviction that there is no such thing as a Supreme Being, and certainly not a Supreme Being Who wrote the Torah.”

The facts are quite otherwise. The most vociferous opponents of the Torah Codes include world-famous mathematicians who are both religious Jews and outstanding *talmidei chachamim*. For example, Rabbi Professor Shlomo Sternberg of Harvard University refers to the Torah Codes as a “hoax”¹ and has vigorously attacked them in an article bearing the vitriolic title “Snake Oil for Sale.”²

2. In contrast to the basic assumption of the Codes analysis, *there is no accepted standard Torah text* (*Kiddushin* 30a). Rabbi Yoseph Kapach, the famous Yemenite *talmid chacham*, points to eight words in Bereishit alone in which the Yemenite Torah differs from the Ashkenazi Torah by the addition or subtraction of a letter. The difference between writing a word with or without a “*yud*” or “*vav*” (*ketav malei* or *ketav chasser*) has no bearing at all on the meaning of the word, but this change renders the Torah “*pasul*.” Therefore, Rabbi Kapach has forbidden his followers to make a *berachah* on an Ashkenazi Torah, which is the version used in Codes analysis.

Rashi points out that the word “*hapilagshim*” in Bereishit 25:6 is written with the letter *yud* missing, and he goes on to explain why this is so. However, if one looks at an Ashkenazi Torah, one finds that the letter *yud* is *not* missing! Much *pilpul* has been written on this Rashi in an attempt to avoid the obvious conclusion—namely, that in Rashi’s Torah, the letter *yud* was indeed missing.

It is important to realize that for Codes analysis based on Equivalent Letter Sequences (ELS), adding or removing a single letter from a text is equivalent to creating a completely different text. Thus, for Codes analysis, we have (at least) three different Torahs: Ashkenazi Torah, Yemenite Torah and

Rashi Torah. Do all three Torahs yield meaningful Codes? If so, this would support the assertion of Professor Barry Simon (a world-famous mathematician and outstanding *talmid chacham*) that any very long string of letters will yield seemingly “meaningful” coded messages.³

Notes

1. Shlomo Sternberg, *Bible Review* (August 1997): 24-26.
2. Shlomo Sternberg, *Notices of the American Mathematical Society* 44 (1997): 938-939.
3. Barry Simon, “A Skeptical Look at the Torah Codes,” *Jewish Action* 58 (spring 1998): 17-24.

Professor Nathan Aviezer
Petach Tikva, Israel

I applaud your coverage of Mr. Harold Gans’ insights about the Torah Code phenomenon. From my decade of immersion in the research, I can vouch for the tremendous progress in Torah Codes.

I bring to my work skepticism, intellectual curiosity and the technical tools needed to properly investigate Torah Codes, having had twenty years of experience in computer analysis and project leadership. This combination has motivated me from the outset to address the critical questions at the center of the controversy. I found that this approach was not only welcomed, but was also shared by Mr. Gans, Professor Robert M. Haralick, Professor Eliyahu Rips, Mr. Doron Witztum and other mathematicians and scientists involved in the research.

Our research routinely measures mathematical significance by comparing results in the Torah to identical methodologies run in *War and Peace* and thousands of other modern and ancient control texts. The Torah text consistently reflects high significance levels, while all other texts exhibit the expected (random, non-significant) levels.

I have been particularly privileged to play a role in the most recent research, another in a series of investigations designed to further test the effects initially observed in the Great Rabbis Experiment (see www.torahcodes.net). The new work focuses on formalizing methods to detect structures long observed in Codes, such as symmetry and repetition. These simple structures can be observed by both scientists and laymen.

Our methodology can be grasped more readily if applied to an everyday street scene. If Bill sees his long-lost friend Jack on the street, it is not an unusual event, since it happens occasionally to most people. But if Bill had followed our protocol—if he had woken up that morning and specified his target (“I have a feeling that I will run into Jack today, within two blocks of my home”), then the same event (seeing Jack) becomes very unusual, or, we might say, “hard to believe.”

Ironically, while the science of Torah Codes is becoming increasingly observable and straightforward, Code detractors continue to question, and sometimes cast aspersions upon, the integrity of the researchers and the legitimacy of our methodology. Typically, detractors focus on technical issues that have already been addressed, such as matters of spelling and flexibility of key words.

Another common approach of Code detractors is to publicize counterfeit “codes” derived from various texts such as *Moby Dick* and *War and Peace*. The implied suggestion is that if coincidental ELS words can be found there, then the codes in Torah must also be coincidental occurrences. Critics of Torah Codes research openly admit that their counterfeit “codes” are, in fact, mathematically insignificant, and that they were “discovered” without using strict protocols and controls. Such controls reveal the distinction between intentional encodings (our long-lost friend Jack appearing on our street) and accidental letter patterns (anyone named Jack appearing anywhere). To the mathematically untrained eye, however, the essential incomparability between real and counterfeit grids is not usually apparent. For full technical details, readers can visit Professor Haralick’s web site, www.torah-code.org.

Some Orthodox detractors base their opposition on their sincere concern that interest in Torah Codes will be used as a substitute for faith. Discrediting the work on these grounds places an obstruction between the public and a form of revelation for our technological age—a gift of encouragement from Above. Those who wish to open this gift, and to make the necessary effort involved in studying its contents, inevitably ask: Who else but the Encoder of the Universe could, in one timeless instant, package this open secret with such subtlety yet with such exquisite timeliness and clarity for those who persistently seek it out?

Art Levitt
Jerusalem

Harold Gans Responds

I’m happy to see the interest and variety of responses reflected by these letters. Mr. Levitt’s remarks underscore how our results and those of our colleagues form a growing, mutually reinforcing collection.

Those readers who express negative reactions have focused on either philosophical or technical issues. I am not in a position to directly address philosophical issues. I personally refrain from speculation regarding the larger purpose and meaning of what we observe.

A lack of familiarity and experience with the Codes’ design leads some to compare them with “parlor tricks” or predictions by Nostradamus. Neither characterization is apt. The Codes research conducted over the past two decades has been, and continues to be, carried out with rigorous control procedures and testing of specific hypotheses. It is deserving of an equally careful technical discussion.

Mr. Schechter states, "From scanning the literature it's clear that scientific investigation has been replaced by name calling and charges of *apikorsut*." It is not we, the Codes proponents, who have engaged in this behavior.

Mr. Schechter says that "the Codes *are independent of the content of the Torah*." No knowledgeable Codes proponent would say such a thing. If Mr. Schechter would like to explore this topic, a paper entitled "Patterns of Co-Linear Equidistant Letter Sequences and Verses" by Bombach and myself, dealing with the relationship between the Codes and the verses in the Torah, was published by the Eighteenth International Conference on Pattern Recognition (August 2006) and is posted online at www.torahcodes.net/bombach0.htm.

Even without studying the phenomenon in question, Mr. Schechter is entitled to his personal likes and dislikes. Before dismissing the phenomenon out of hand, however, he might wish to bear in mind that letters of emphatic support for our research and for the dissemination of our findings were written by Rabbis Shlomo Wolbe, Shlomo Zalman Auerbach, Matisyahu Salomon, Shmuel Deutsch, Shlomo Fisher, Shmuel Kamenetsky and Moshe Heinemann.

In regard to the comments of Dr. Rosen, my training and profession are in field of mathematics, not theology. I can only comment professionally in regard to statistical evidence of the existence of Codes in the Torah, not on whether or not people like the idea. As for the valid question of what to do with our findings, I consult my *rav*, Rabbi Moshe Heinemann.

Professor Aviezer states that I dismiss the Codes opponents as "mathematicians who take as their starting point the firm conviction that there is no such thing as a Supreme Being." But he has omitted part of my statement, thereby changing its meaning. I stated that only "*some* [my emphasis] of these mathematicians take as their starting point the firm conviction ..." This sentence in its entirety is true.

Professor Aviezer says, "In contrast to the basic assumption of the Codes analysis, there is no accepted standard Torah text." On the contrary, there is no such assumption on our part, stated or unstated. The a priori choice of the Ashkenazi Torah was based on its global acceptance historically by the greatest number of Jews.

The fact that there are variant texts is totally irrelevant to the analysis of any one of them, provided that the choice of text was a priori. Whoever so desires is, of course, free to conduct research on other texts.

The question concerning the status of the accepted Torah text is part of a more general challenge to Torah Codes. That challenge claims that the Torah we have today probably differs so significantly from the Torah of millennia ago, that any and all codes which may have been present in the original Torah must be undetectable today. This assertion depends on assumptions regarding the extent of the possible differences.

Let us first examine the evidence for corruption of the

text. One line of evidence is that there are numerous Talmudic and commentary references to variant spellings of isolated words in the Torah, and lost expertise in "added and deleted" letters. This approach fails to take into account the fact that such differences can be isolated and corrected by a letter-by-letter majority vote procedure, using several geographically and historically separated texts. This was implemented several times in our history, most recently by the Rema in the thirteenth century, with extensive additional validation by Rabbi Mordechai Breuer in our own generation. Please see *The Aleppo Codex and the Accepted Text of the Torah* by Rabbi Breuer for an account of how this technique has maintained textual accuracy.

Another argument is derived from the Talmud, *Kiddushin* 30a. The *gemara* states that the "*soferim*" had a tradition of the location of the center letter of the Torah. This center is 4,829 letters off from the actual center of our Torah.

Critics who cite this as evidence of textual corruption do not address some key considerations. First, it is virtually impossible for scattered errors to displace the center of the Torah by thousands of letters. Statistically, the errors should occur approximately equally in both halves of the Torah so that the center would not move significantly. The critics also point out that the Pnei Yehoshua, commenting on this *gemara*, quotes the *Zohar* as stating that the Torah is 600,000 letters long. Our Torah, however, has only 304,805 letters. The Pnei Yehoshua suggests that the *Zohar* used an esoteric counting process (e.g., counting each stroke of a letter) to obtain a count of 600,000. The same may be true of the ancient *soferim* quoted in *Kiddushin*, as suggested by Rabbi Yaakov Kamenetsky in his book, *Emes L'Yaakov al ha Torah*. Rabbi Kamenetsky demonstrates that certain counting techniques will produce some of the results quoted in *Kiddushin*, as well as the count of 600,000 letters.

Furthermore, it is not possible for sections of text thousands of letters long to have been lost, insofar as the Samaritan Torah predates the *Zohar* and the Talmud by centuries, and is 98 percent in agreement with our Torah. Similarly, the Septuagint predates both the *Zohar* and the Talmud by hundreds of years. Any major deletion in the Torah since then would be obvious in any comparison between the Torah and this Greek translation.

Given that none of the evidence for textual corruption gathered thus far is definitive, other forums may be more appropriate for taking these issues further. Meanwhile, a great number of Torah Codes provide evidence that the current Torah text is remarkably accurate. I would recommend that interested readers examine the variety of results to date. For example, analysis of the Great Rabbis Experiment indicates that the error rate in Genesis is, at most, 1 error per 1,000 letters of text. This result is reinforced by subsequent Codes, as detailed in the peer-reviewed paper, "Component Analysis of Torah Code Phrases," by Art Levitt, published in the proceedings of the Eighteenth International Conference on Pattern

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Recognition. This code spans 60 percent of the Torah, from nearly the beginning of Genesis to nearly the end of Numbers. The odds that this code could have occurred by chance are 1:2,500,000. If there were only one added or deleted letter per 25,000 letters of text, the chances that this code could survive such corruption is less than 1/1,000.

It should be noted that the above-mentioned code was peer reviewed twice and published in two scientific conference proceedings; the protocol is transparent, and it can be shown to be statistically significant without any knowledge of Hebrew.

Taking the above points into account, the Codes provide strong evidence of the text's accuracy, rather than the opposite claim, whereby gross inaccuracies would allegedly provide evidence for Codes' non-existence.

Professor Aviezer is a reputable Israeli physicist whose mathematical and linguistic background would enable him to professionally evaluate my peer-reviewed paper mentioned above. The paper provides statistical evidence of the Torah Codes phenomenon, and demonstrates the methodological validity of the Great Rabbis Experiment of Witztum and Rips, published in *Statistical Science* in 1994. I challenge Professor Aviezer to find a fatal flaw in the paper.

Postscript

In 2005 Harold Gans asked if I'd be interested in interviewing Orthodox scientists engaged in Torah Codes research. My reply, expressed as diplomatically as possible, was that I could not in good conscience participate in such a project, no matter what they claimed to have discovered and no matter how well-intentioned their efforts. For to pin our people's *emunah* onto some sort of inscrutable computer trickery was to insult not only our historical capacity for genuine belief but to demean our Torah as well.

To my surprise, Mr. Gans was not displeased. Actually, he said, it was preferable that a critic, rather than a proponent, do the interview.

It would take me a full year and a half to begin to grasp even the most basic operating principles of the mathematical protocol, but after thirty-five years of religious observance, the fundamental principles of Torah had started coming alive, unbelievably, in the black and white Hebrew letters.

It's not, God forbid, that I hadn't believed before. After all, I'd left my childhood home for the sake of that belief, and had said goodbye to my parents and sisters, and chosen a mate, and brought up my children in Israel, for the sake of that belief. But I realized that all those years I'd believed primarily with my heart, more than with my mind. Intellectually, buried way underneath the surface, there had been an unacknowledged gap.

There were nights, after an interview, that I'd step outside, look up at the stars, and know in a way I'd never known before that the seeds of reality are in fact contained in the

Torah; that it's not just a beautiful metaphor to say that the past is the present is the future, or that the universe was created with His words.

Time after time, after such an experience, however, my mind would close down involuntarily. It was too much light for my mind to hold. I could not sustain this awareness more than for a few moments, and I'd be ashamed of how quickly I reverted to normal. In spite of that keener sense of my human limitations, I've come to appreciate that our limitations protect us, and I needn't understand that which is beyond my mind's ability to absorb. As the Torah Codes researcher and Hebrew University Professor of Mathematics Dr. Eliyahu Rips has said, "Although modern man is scornful of simple faith, simple faith is scientifically correct."

The story is told that sometime before the creation of the State, an Arab farmer was plowing his field when suddenly the earth gave way and an underground chamber full of light became momentarily visible. It was here that the utensils of the Temple had been concealed.

My position vis-à-vis Torah Codes reminds me of that Arab's situation. I feel as if I've stumbled upon something and have been granted a glimpse of the light. I long inexplicably to share it with others, but most people are not inclined to take a peek.

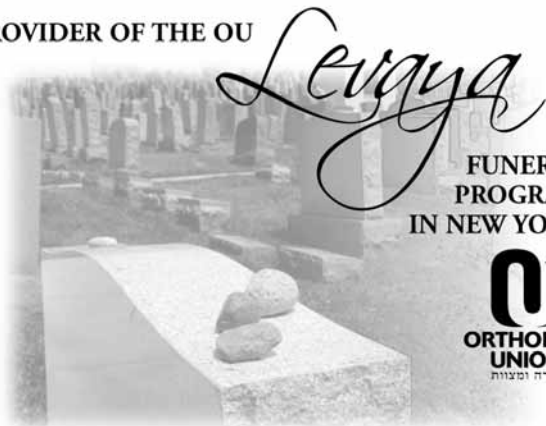
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