prediction for an "atomic holocaust" of Israel in 1996 did not pan out, he found the word "delayed" encoded near the prediction. "Why didn't the Bible code just tell the one real future?" he asks. "The answer appears to be that there isn't just one real future; there are many possible futures." So if Drosnin is right about the future, he is an amazing prophet; if he is wrong, we just happened to get a different future that time. He also tries to bolster these unsupportable ideas with appeals to chaos theory and quantum physics. By the end of the book it becomes clear that, behind the facade of reportorial tough-mindedness and appeals to the objectivity of science and mathematics. Drosnin harbors dreams of becoming the prophet of our age. He believes he is the one to uncover the secrets in the book sealed by the Old Testament figure, Daniel. This is sacrilegious folly.

Drosnin has appeared on *Oprah*, and he has sold the movie rights to Warner Brothers. The book has hit the bestseller lists of the *New York Times*, the *Times of London*, *USA Today*, and *Publisher's Weekly* and has been written up in major newspapers and magazines (not to mention getting frontpage coverage in the tabloid paper, the *National Examiner*, along with a story on the marital prob-

lems of Frank and Kathie Lee Gifford). There is also a good deal of discussion of *The Bible Code* on the World Wide Web. Generally the press has not been favorable, but the "reader reviews" on the Simon and Schuster home page were nearly all positive, with an average rating of 7.6 out of 10. (Then again, there are readers like Marilyn Glads, who posted this review: "This book freaked me out. I now know why I hate math and religion.")

Mathematics already has a public relations problem in that many people believe the field is a bag of tricks used to torment schoolchildren. Will readers of *The Bible Code* now conclude that what mathematics is *really* good for is doomsday prophecies? Most of them do not have the background in statistics and mathematics to be able to see the holes in Drosnin's arguments. But some may swallow *The Bible Code*, holes and all, just because it appears to offer a shred of hope for salvation from the many dangers our world faces.

Comments on The Bible Code

Shlomo Sternberg

The Bible Code by Michael Drosnin exploits a hoax perpetrated by two Israelis, E. Rips and D. Witztum, which purports that there are messages about the future encrypted in the Hebrew text of the Bible—codes which can only be deciphered by computer. It is easy to give a concise explanation of why this is a hoax, and so I shall do so here.

First of all, the "decoding of these hidden messages" depends on the letter-for-letter accuracy of the current electronic (Koren) version of the Bible as being the "original Hebrew version". This is simply not so. This is not a matter of belief, but a matter of fact: Orthodox Jews, for example, hold the Talmud in extremely high regard. But any serious student of the Talmud knows that there are

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many citations of the Hebrew Bible which indicate a differing text from the one we have. In the Five Books of Moses these come to about one hundred discrepancies. One of the oldest complete texts of the Bible, the Leningrad codex (from 1009) (also available electronically) differs from the Koren version used by Rips and Witztum in forty-one places in Deuteronomy alone. In fact, the spelling in the Hebrew Bible did not become uniformized until the sixteenth century with the advent of a printed version that could provide an identical standard text available at diverse geographical locations.

Second, "hidden messages" similar to those of Drosnin, Rips, and Witztum can be produced in any sufficiently long actual text, and such have in fact been produced.

These two arguments apply equally well both to Drosnin's book and to the paper that appeared

¹A good place to start is http://yahoo.com/news_and_ Media/Current_Events/Bible_Code_Controversy/.

in *Statistical Science*, obviously the result of sloppy refereeing and poor editorial policy. So there is no reason to distinguish between the two as Ms. Jackson does in the accompanying article.

What does this sordid affair have to do with mathematics? Nothing, so it would seem. So why does a review of Drosnin's book appear in these pages?

A first possible reason might be that Rips is a professor of mathematics at the Hebrew University. So what? It is not a crime to perpetrate a hoax, at least according to American law with our free market in goods and ideas. Quite the contrary! But even if it were a crime, why should the AMS be interested? For example, the man accused of being the Unabomber holds a Ph.D. in mathematics. I have not seen a campaign mounted in these pages for a defense fund on his behalf so as to spare our community the indignity of having one of our Ph.D.s convicted of murder.

A second possible reason is that three prominent mathematicians—D. Kazhdan, I. Pyatetski-Schapiro, and R. Aumann—are cited in the book as authorities who believe in these "codes". Even if these citations are true, again, so what? If it is not a crime to perpetrate a hoax, it is not a crime to be duped by a hoax or to promulgate it.

I think that I can narrow in on the reason by observing that no academic of remotely comparable credentials in any field other than mathematics is brought as support for these "codes". No linguist, no Bible scholar, no computer scientist, no statistician. The impression given by the book, and reinforced by the massive international publicity campaign surrounding it, is that it is the domain of mathematicians using their mathematics to pass judgment on the veracity of the claims made by the perpetrators.

Are Drosnin and his publicists responsible for the outrageous idea that mathematics is somehow involved in this puerile nonsense? Here, alas, the answer is in the negative. Several years earlier, Witztum published a book (in Hebrew) explaining the "codes". An introduction was written by four distinguished mathematicians: J. Bernstein, H. Furstenberg, D. Kazhdan, and I. Pyatetski-Schapiro. It is true that the encomia given by these eminent men (at least in the English-language version of the introduction) were of a limited nature: "This is serious scholarship, worthy of further investigation, etc." But the very fact that they banded together to form a committee consisting solely of mathematicians in writing their introduction in and of itself has given rise to the widespread notion that this enterprise is supported by mathematics. In so doing they have not only brought shame on themselves, they have disgraced mathematics.