
Letters to the Editor

The California Math Wars, Part II—August 1997

Margaret DeArmond, president of the California chapter of the National Council of Teachers of Mathematics, is quoted as saying that IMP works for her students. Those objecting to IMP ask what does it mean “to work”? Apparently it does not include some usual measures of student success.

East Bakersfield High School, with Ms. DeArmond as chair, has been an IMP school since 1991, one of the first to pilot the curriculum, while rival Bakersfield High has been able to resist the subtle pressure to move to IMP, CPM (the two California favorites), or the like because of its strong indicators of student performance. The situation was described in an excellent full-page discussion of current reform versus traditional programs at the two high schools in the *Bakersfield Californian* on August 4, 1996. The country needs more such objective reporting. The contrast in student performance levels between the two schools contradicts the words of Dr. Julian Weissglass, also quoted in the *Notices* article, but here [taken] from his testimony on June 24 before the California Academic Standards Commission in opposition to their draft of grade-level mathematics standards: “The Interactive Mathematics Program shows that secondary students studying a cur-

riculum rich in problem solving and context-based mathematics pursue mathematics longer and learn more than in the traditional school curriculum.” The student performance numbers are so different between the two schools that it is surprising that the school board has not chosen to intervene on behalf of unknowing students at East Bakersfield.

- At the top end mathematically, East Bakersfield had only 2 students who took the AP Calculus exam last year and only 1 who passed, with a score of 3, the minimum passing grade. By contrast, Bakersfield High had 29 students [who took the exams], of whom 25 passed, 18 with a score of 4 or better.
- At the top end overall, over the last five years Bakersfield High has had 32% of the National Merit Scholar semifinalists of Kern County with only 9% of the county’s student population.
- Still looking at the academically better-prepared students, the percent of the seniors at East Bakersfield taking the SAT has dropped from 30% to 23% from 1992 to 1996, while Bakersfield High has risen a couple of points to 40% and still manages to maintain a 37-point lead in the mathematics average over East Bakersfield, to rank

in the top third of all high schools in California versus the bottom third for East Bakersfield.¹

- At the opposite end of the performance spectrum, the Title 1 students at Bakersfield High more than doubled the one-year growth of students at East Bakersfield on the district’s pretest/posttest assessment.

The *Notices* article also made strong reference to the MathLand self-study that supposedly verifies one year of mathematical growth at or above national averages based on 30,000 students. It avoids pointing out that, at least in some cases, the “growth” is really “recovery” from a disastrous first year of MathLand itself. That is clearly the case at the only school that I have been able to identify in the study. Despite repeated requests, Creative Publications refuses to release the information that would allow their analysis of the data to be independently confirmed. Even more damning than the “recovery” factor—and with negative ethnic implications as well—they ignored a full 80% of the student body at that school, those

¹No IMP school in California exceeded 70% in contrast to the 83% from the IMP evaluation study of the Wisconsin Center for Education Research referenced in the *Notices* article.

	Grade 2	Grade 3	Grade 4
District Median	93-94	94-95	95-96
Roscoe Elem.	27	27	24
	32	23	15

students who were tested in Spanish. (The MathLand materials are available in Spanish.) Those students experienced continuing severe decline in the second year as well. Above are those missing numbers for the fourth grade at which the evaluation was made, along with the preceding years' numbers. The test used was Aprenda, and the numbers are national percentiles.

These numbers are reality, not rhetoric, and we need more of the former and less of the latter. Don't kill the messengers; start listening to the message. Performance matters.

Wayne Bishop
California State University, LA

(Received July 18, 1997)

Final Comment on California Math Wars

Wayne Bishop's letter is full of errors and misrepresentations. I am not the chair of the mathematics department at my school. The August 4, 1996, local newspaper's mathematics discussion was written by two teachers and appeared on the "Opinion" page. He attempts to compare two schools that have vastly different student populations. Calculus students at my school have not taken the Interactive Mathematics Program courses. Students in the Title I program are not enrolled in IMP. The mathematics community should be discussing the mathematics content to be taught, the best instructional practices, and national research. There is no reason to focus on two very different schools in Bakersfield, California.

Margaret DeArmond
President, California Mathematics
Council

(Received August 16, 1997)

Author's Correction

Regarding my piece on "Rigor in Calculus" in the September issue: In the last paragraph on page 933, the second sentence was to include a helpful parenthetical remark, as follows: "It is equivalent to (ϵ, δ) (as it states that the oscillation of the function is zero) yet is expressed in low-key, familiar terms." The fault is mine, as the remark was missing from the text I submitted; apparently it got lost during last-minute cutting and pasting. I regret the slip-up.

Leonard Gillman
University of Texas

(Received August 16, 1997)

"Bible Code" Author Responds

I generally don't reply to reviews, but the comments by Shlomo Sternberg on my book *The Bible Code* that appeared in your September 1997 issue were shameful.

I would note the following:

(1) It is an outrage for a scientist of Dr. Sternberg's standing to accuse a respected scientist like Eliyahu Rips of perpetrating a "hoax" without offering any evidence.

Dr. Rips, a recognized authority in group theory at Hebrew University, told me that Dr. Sternberg never communicated with him in any way, never gave Dr. Rips a chance to respond to inquiries.

And, of course, Dr. Sternberg has not found any evidence of fraud. If he had merely spoken to Dr. Rips, he would know what everyone else who has met or talked to Dr. Rips knows — Ilya Rips is a totally honest man.

(2) Had Dr. Sternberg actually checked the Bible code himself, he also would know that the kind of accurate, coherent information found in the Bible has not been found in any other text.

Of course, it is possible to find "Yitzhak Rabin" encoded in any suf-

ficiently long text, but I am certain Dr. Sternberg will not find the words "assassin that will assassinate" crossing Rabin's name in any text other than the Bible. He certainly would not have found it anywhere else a year before Rabin was killed.

(3) I found those words crossing "Yitzhak Rabin" the only time his full name is encoded in the Bible more than a year before the prime minister was assassinated.

And I personally warned Rabin through his closest friend, a well-known Israeli writer. He confirmed that to the *New York Times*, and the chief scientist at Israel's Ministry of Defense also confirmed it to the *Times*.

It is this simple reality that Dr. Sternberg simply ignores: the Bible code did accurately predict Rabin's murder a year in advance.

(4) It also accurately predicted in advance the exact date of the first Scud missile attack on Israel in the Gulf War.

It also accurately predicted in advance the exact date that a comet named Shoemaker-Levy would strike Jupiter.

No one has found anything like that, in advance, in *Moby Dick* or *War and Peace* or the Manhattan telephone directory.

(5) Perhaps this offends Dr. Sternberg's religious views. Perhaps it confounds him as a mathematician. But it is nonetheless the truth.

I cannot account for the reality of the Bible code, because I am not religious. I do not believe in God and therefore cannot identify the encoder. But I do know that however many human hands wrote down the words of the Torah over however many years, some other intelligence was involved.

Because there is simply no doubt that the Bible code does reveal the details of events that took place long after the Bible was written.

It seems odd that any religious man would doubt the ability of an all-seeing, all-knowing, all-powerful God to encode the Torah in any way he chose. Surely it would not matter if such a God did it through one man or many men, through one version or many versions of a text that is holy, that transcends its human scribes.

In reading Dr. Sternberg's commentary, I am reminded of the scientists who joined the Church in condemning Galileo for daring to suggest that the Earth circles the Sun. They too were offended on both religious and scientific grounds.

In years to come I think Dr. Rips's work will be recognized as revelatory, and Dr. Sternberg's attack will be forgotten. For the moment, however, Dr. Sternberg — not the brave mathematicians who supported Dr. Rips — has shamed himself and the world of science.

In reply to Allyn Jackson's review, I will note only two things:

(a) Ms. Jackson has been taken in by the real hoax: Brendan McKay's silly effort to confuse people who don't understand what the Bible code is.

There's a difference between looking for one name, "Yitzhak Rabin", and finding it encoded only once in the Bible and finding his assassination plainly encoded in the same place in advance, as I did, and McKay's search for many past assassinations in many texts until he found one random pattern in *Moby Dick*.

(b) Rabin's assassination was hardly expected. No Israeli prime minister had ever been assassinated.

In any event, even were it expected, that would hardly account for it being encoded in a text 3,000 years old.

Michael Drosnin
New York, N.Y.

(Received August 17, 1997)

Notices Shouldn't Have Reviewed "Bible Code"

I think it is a disgrace that the *Notices* printed what appeared to be a serious review of *The Bible Code*. Isn't it clear enough that this book is total, utter NONSENSE? Why didn't you say so? Do you have doubts?

Anybody who respects the Bible and/or mathematics should be outraged. Look long enough and you find the "prediction" "Clinton-will-get-third-term" in the Bible, *War and Peace*, and the U.S. tax code. Will you also print a review of a book *Pi Equals 22/7*, *After All*, devoted to several

proofs of this statement, if it only makes some bestseller list?

M. Dugas
Baylor University

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About the Cover

The figure shows a simulation snapshot in the time evolution of a metallic alloy after it has been rapidly cooled through a symmetry-breaking (cubic to orthorhombic) solid-solid phase transformation. The computation performs a gradient flow on an appropriate nonconvex free energy surface. The blue and red represent the two solid phases, which are separated by a white interface. One observes needle-like textures evolving from a tweedy precursor phase. Computation performed at Los Alamos National Laboratory by Pieter Swart (swart@lanl.gov, LANL), Matthew Killough (Courant Institute-New York University), and William Kerr (Wake Forest University).

Addendum to September 1997 cover description: Substitution tilings are certain hierarchical structures in a geometric space (cf., Radin, *Notices*, April 1996). Instead of placing these tilings in Euclidean or affine space, as is usual, we may consider far more general settings, as this image suggests. Relevant preprints can be found at <http://www.geom.umn.edu/~strauss/>.

—Addendum courtesy of
Chaim Goodman-Strauss