The Language Police Knock on Math’s Door


This book, which is 99% complaint, contains material that is simultaneously screamingly funny and tragic. The basic observation is this: Many pressure groups in the USA object that certain things are said, or left unsaid, in school textbooks. These groups have pressured individual states and individual publishers to provide codes or guidelines. The states, desiring peace and tranquility for their citizens, and the publishers, who have no desire to offend any group and wish only to make money, have acceded to these demands. Authors, who also want to make money, or who believe that they have a message they can get through to students despite this pressure, have also caved in.

What are these pressure groups? Feminists, right wingers, left wingers, Comstockites, ethnic groups, national groups, religious groups, the disabled, the old, the veterans, the rich, the poor, the vegetarians, the anti-eurocentrists, the multiculturalists, the animal rights advocates. . . . I learned from combinatorics that from a set of \( n \) items, one can form \( 2^n - 1 \) nonempty subsets. I sometimes think—judging from the volume of junk mail I receive—that with \( n = \) the population of the USA, all these subsets have already formed pressure groups that are putting out newsletters, promoting “good causes,” asking for money, and demanding proportional if not equal political representation.

Ideals are often conflicted. All of us at some time have come across material, written or in other media, that we believe is false or dangerous; we are convinced that the world would have been better off if that material had been left unproduced. All of us at some time have raised our voices in protest, have opened our wallets or exerted censorship pressures in some way. I believe also that most writers have written material that has raised eyebrows somewhere in the world. I once depicted a member of a rare and odd Romanian sect satirically. Don’t think I didn’t get my knuckles rapped. Codes of behavior and censorship are as old as civilization and will not go away. The thing is to recognize the dimensions of censorship at any time and respond appropriately.

Diane Ravitch, a professor of the history of education at New York University, was assistant secretary of education in the administration of President G.H.W. Bush. She is no screaming innovator, but her book is right on target.

Ravitch considers censorship attacks from the right and from the left. She blasts away at the publishers, the test-development companies, the sanitization think tanks, the state and local adoption committees. Even scholarly and professional societies come under fire:

“[Societies such as] the American Psychological Association publish bias guidelines that authors for their journals must follow if they want their work accepted.”

Her big-gun fire is reserved for the subjects of literature and history. About literature she writes:

“The literature textbooks for middle school and high school from the major publishers are compilations of odds and ends. The books are littered with non-literary features, such as an essay on homelessness or air pollution. One [book] teaches students how to read a weather map, a time line, and a telephone book.”

“One book published by Prentice-Hall . . . has an excerpt from a script of a once popular television program, Xena: Warrior Princess. This script would not qualify as ‘literature’ by any standard other than the one in which absolutely everything in print is ‘literature.’”

About history she writes:

“The desire to rewrite history is one that continually plagues bias reviewers.”

“In a significant variation on the cultural equivalence theme, Houghton Mifflin’s world history text for middle students implies that every world culture is wonderful except for the United States. . . . Compared to other cultures of the world, the United States sounds like a frightening place. Why people keep trying to immigrate to this unwelcoming, mean-spirited culture is a puzzle.”

I once saw Lincoln’s Gettysburg Address translated into PowerPoint-ese, and now I’ve read of one editor’s struggle to adapt the address so as to comply with New York State sensitivity guidelines:

“On and on he went, carving out one line after another until all that was left was: ‘We have a really cool country, and we should keep it that way.’”
How extensive is the censoring process? Ravitch tells us that

“The Scott Foresman-Addison Wesley bias guidelines comprise 161 pages, longer than most of their [publishing] counterparts.”

In an appendix, *The Language Police* provides a list, almost 30 pages long, of “banned words, usages, stereotypes, and topics.” Here are a few choice selections:

“Bubbler (banned as regional bias, replace with water fountain).”

“Pollyanna (banned as sexist, replace with optimist).”

“Balance names like Mary, John, and Jane with names such as Jose, Lashunda, Che, Ling.”

“Avoid butter or pies in texts” [i.e., promote a healthy diet in conformity with someone’s diet pyramid].

“Avoid dinosaurs (implies evolution).”

What results from all this is featureless glop that is “bland, homogenized, sanitized and boring.” No wonder the kids run from their school books to the TV, where they can savor life as depicted in a more exciting and corrupting medium.

What about mathematics? There can’t be too much opportunity in math for the language police. After all, 360 + 360 = 720, unless one wants to eschew Arabic numerals and express the sum in Babylonian. It’s not very easy to tamper with “pure” math, but “applied” math is deeply engaged with societal problems. Hence, politically correct themes can be embedded in word problems or just thrown in gratuitously via graphics. There are “guidelines groups” that will instruct textbook authors on the acceptable formulation of a word problem.

A few clips about math:

“Claims of gender-bias focused on mathematics . . . where there was a test-score gap caused entirely by sexist language or topics in the test questions.”

“In mathematics, what matters most is not whether textbooks effectively teach mathematics, but whether they incorporate multicultural themes and biographies into the math curriculum.”

“Textbooks in science and mathematics grew fatter as publishers added biographies of mathematicians and scientists who were women, African Americans, Hispanic Americans, Asian Americans, and people with disabilities. Students became used to seeing sidebars about social issues in their textbooks, even when they were irrelevant to the lessons.”

I didn’t exactly believe Ravitch that the math was being neglected, so I took a look at the Algebra I textbook currently used in a Providence high school. The book is large (8½” × 11”), 800 pages long, slick, glossy, very heavy, absolutely cluttered with highlighting and pictures, in color and of top quality, but distracting. It struck me that the graphics are often irrelevant and conduce to a kind of infantilization that relies on pix to insinuate points. The text was written by four authors of impeccable qualifications, vetted by two dozen mathematical educators from many states, and produced by a cadre of assorted talents that would suffice to mount a production of *Aida* at the Met, complete with elephants.

The math content is decent, even a bit sophisticated here and there. Applications and computers are emphasized, and a tiny bit of axiomatics peeps out. (Echoes of the New Math of a half century ago!) However, some of the explanations—simplified to the point of becoming absurdly complex—confused my wife when she did some volunteer tutoring recently. Have the authors thrown in the towel? How do they feel when they realize that quality instruction could have been imparted at a quarter of the length and a quarter of the cost?

Let me fantasize by quoting a word problem from a copy of *Carleton’s Compendium of Practical Arithmetic: Designed for the Use of Schools in the United States, and Containing What Is Necessary for the Merchant, the Mechanic, the Mariner, and the Farmer* (Boston, 1810, 251 pages, 4” × 6½”):

“A merchant bought 400 hogsheads of rum. Each contained 116 gallons, 2 quarts, 1 pint. The rum cost 75 cents per gallon. What did the whole cost? Ans: $34987.50.”

If this problem appeared in a math text today, it would be accompanied by a sidebar linking it with the old “triangular sea trade” that involved shipments of rum and slaves. And still there would be complaints: from AA, from the animal lovers, and from the Society for Metrization, Decimalization, and Comma-ization.

The writing of professionals is not immune from the pecksniffs of bias. I recently received the following letter from a friend who is a distinguished scholar of the classical and ancient near-eastern world:

“I committed the crime of calling Ptolemy, Hipparchus, and Meton ‘Greek astronomers.’ They changed Ptolemy to ‘Egyptian astronomer of the Hellenistic Roman period’; Hipparchus to ‘an astronomer working on Rhodes’; Meton to ‘an astronomer working in Athens.’ (‘They’ being
the editors of the Mesopotamian volume of a series of reference books on different ancient cultures for high school students.) I changed everything back to ‘Greek.’ We had a tussle. Finally we compromised by calling them merely ‘astronomers.’ Ridiculous! Then I was told by one of the editors that if I ever again wrote a chapter in a book, I was going to have to be more flexible!! Do this again? Never!”

So what can be done? Here is my summary of the Ravitch prescription:

- Discontinue the state adoption process.
- Increase competition via variety in content and treatment.
- Expose censorship to public scrutiny.
- Get better educated teachers who are masters (oops!) of what they teach, and let them teach according to their lights and not in lock-step from an idiot-proof text.

Amen. But it won’t be easy.

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