Federal prosecutors in Baltimore announced last month they would not file criminal or civil charges against a Boston cell biologist, Thereza Imanishi-Kari, Ph.D., of Tufts University.

The prosecutors said they were not sure they could convince a jury that she faked data in a controversial research paper, published in the journal Cell in 1986, and then tried to deceive the National Institutes of Health (NIH), her grant source, and Congress when called to account.

The case also involves Imanishi-Kari's co-author, Nobel laureate David Baltimore, Ph.D.; he lost his job as president of Rockefeller University, in New York City, for defending the research, and insisting, abrasively, that Congress has no right to meddle in scientific affairs. The two co-authors have resisted a concerted effort by Congressman John D. Dingell (D-Mich.) and his Subcommittee on Oversight and Investigations to have them convicted of misconduct and fraud.

Spheres Defined

Some scientists think the case is important, beyond its tortured particulars. They say it raises sharply, in a contemporary context, Matthew's admonition (XXII, 21) on what "to render ... unto Caesar" — and what not to.

In science, declares Harvard microbiologist Bernard Davis, Ph.D. — who follows the case closely, and supports the Cell authors — "what belongs to morality" is science's responsibility; "what belongs to the law" is Dingell's.

The case started as a conflict between Imanishi-Kari and a disgruntled post-doctoral fellow, Margot O'Toole, Ph.D., at MIT. Such squabbles are common in scientific labs, as in other venues — one female academic doctor whom we know calls them "titty wars."

But this conflict persisted, and grew — a book will be needed to document its turns and twists — and became politically meaningful when Rep. Dingell seized on it, as a

Reputations Ruined

"Someone at [the NIH Office of Scientific Integrity] seems to have said in effect, 'I've heard some funny things about your laboratory, Dr. Imanishi-Kari, Dr. Baltimore. Prove to me that you're innocent! In the meantime, I suspend your grants, we examine your notebooks, we conduct an investigation, and we leak the results.'"

"This is really, truly dangerous stuff.... "In the aftermath ... we've got ruined reputations. Imanishi-Kari might say, 'You're unable to prove that I'm guilty. I am innocent. Please tell me what office I can apply to for the restoration of my reputation!'"

— Darcy Wilson, Ph.D.

highly visible example of alleged scientific misconduct. His attack, until now, has been quite successful.

As a result, one immunologist, Darcy Wilson, Ph.D., of the La Jolla Institute of Experimental Medicine in California, said recently, in "outrage," that the public "now looks at all scientists with suspicion."

Researcher Wilson spoke at a mid-July colloquium on the case at the Marine Biological Laboratory (MBL) in Woods Hole, Mass. Imanishi-Kari attended. She and Baltimore claim

The 'Cell' Case: Why Nonscientists Should Care

Despite our society's ever-increasing need for researchers, the tabloid-TV-Hollywood view of scientists continues to be a grotesquerie. Campaigns to disgrace research leaders like Nobelist Baltimore and AIDS virus pioneer Robert Gallo serve to concretize these negative images. They are attacks, too, on academic freedom, and on free inquiry.

This is why the probity of these attacks on scientists now is critically important. This is why, too, we are focusing on the Baltimore/Imanishi-Kari case — seemingly one of the least defensible examples of science fraud and misconduct.

If the case against them, driven — powerfully — by Rep. John Dingell (D-Mich.) can be shown to be defective, then it may be possible to derail the witch-hunt against science and thought.
TV Called Root Of Gun Killings; A Fix Is Offered

Some PROBE readers were distressed by our straight and unvarnished news report (PROBE, Feb.) that gun bans may not stop mayhem. The reason is that homicide rates in U.S. states with loose gun laws and many handguns were found, in a study, to equal the homicide rates in Canadian provinces that have tight gun laws and few licensed handguns.

This study, by Seattle psychiatrist Brandon S. Centerwall, M.D., a private practitioner, appeared in the prestigious American Journal of Epidemiology; a rebuttal expert, assigned by the journal, failed to punch holes in Dr. Centerwall's thesis. Our phone calls to the Coalition to Ban Handguns in Washington, D.C., elicited the promise of a rebuttal, which however was not forthcoming. This suggests to us that there may not be a very persuasive one available.

So: If licensed handguns are not the cause of the plainly evident rise in murderous violence, then why go through the difficult — and probably politically doomed — effort to ban them?

TV Implicated

Dr. Centerwall, meanwhile, does have a thesis to account for the increased U.S. (and Canadian) homicide rates in recent decades, and it now is our turn, as First Amendment radicals, to be discomfited. The culprit, by no means newly discovered, is TV violence, Dr. Centerwall says, particularly exposure to TV violence during kids' pre-adolescent years.

For people who watch a lot of TV (we don't), the level of TV violence may not be news. Dr. Centerwall, writing in a recent special issue of the Journal of the American Medical Association (June 10) on violence, reviews an impressive scientific literature which documents this video mayhem and its effects. More important, some of his own research shows that in both the U.S. and Canada the rapid post-World War II rise in television ownership was followed, in 10 or 15 years, by a doubling (93% increase) in homicide rates among whites.

In South Africa, where TV was banned, the homicide rate in a comparable white population remained steady. But when TV was introduced there, in 1975, the homicide rate rose sharply.

Reform Unlikely

Dr. Centerwall says the cause-and-effect relationship between TV exposure and increased violence is as clear as that between smoking and lung cancer. He says it is no more fruitful to expect TV to reform itself than it is to expect tobacco companies to stop selling cigarettes. For either TV or cigs, he notes, a 1% change in market share is worth, plus or minus, a quarter billion dollars.

What to do? Censorship of TV at the source is not necessary, the Seattle psychiatrist says, to our relief, any more than a car ban is needed to stop traffic deaths. Rather, technology, in the form of time-channel locks for TV sets, now allows parents, even while absent, to control their pre-teens' TV exposure.

These devices, such as the Sony XDR, currently are add-ons, Dr. Centerwall notes. They could be mandated by Congress, just as closed-captioning devices for the deaf will be required on most TV sets by next year.

# # #

This reform might be achieved under Republicans, who say they abhor violence. It certainly could be done by Democrats.

If the Democrats win in November, many long-buried reform proposals will be revived. The Democrats would do well to proceed carefully, on the basis of evidence like that adduced by Dr. Centerwall.

Narrowly focused, technology-based reforms that can be carefully monitored — and if necessary changed — seem more likely to succeed than broadbrush, but inevitably thin efforts to force wide social change. People are people — and don’t like to be coerced.
Science and Democracy Challenge
Ideologically ‘Bereft’ Intellectuals

In a bleak essay in the Times (July 26, 1992), critic Daniel Bell, one of the last successful mid-century intellectuals, laments the end of Americans’ great cultural love affair with Europe. He rue the demise here, and there, of utopian ideologies, and dismisses the possibility that “new adventures in technology” such as mixed media and computer-generated imagery will open new artistic or conceptual horizons.

Bell sounds tired. We think he is wrong.

The European lures seem less and less appealing to us as time goes by. Is there strength in Hemingway’s empty affectations?

The continuing stream of literary memoirs, bios and letters from Euro-cultural icons like Sartre/Beauvoir and Nicholson/Sackville-West depict them as ever more tawdry — and elitist — and ever less relevant for Americans, then or now. (It’s surprising how similar, in their egoism and personal duplicity, these grand literary couples from the French “Left” and English “Right” turn out to have been.)

Nevertheless, Bell, who is a scholar at the American Academy of Arts and Sciences, in Boston, writes:

For the intellectuals, and the culture, there is a … dilemma.

The “project” that framed intellectual life during the past 200 years in the West has been utopianism and universalism, the direction of history laid down by the Enlightenment.

“Those larger visions,” Bell laments, “have now receded” — to which, one might reply, Hosanna!

Not that we are attracted to resurgent religiosity or narrow nationalism, which this century’s equally bloody isms repressed, but could not destroy. We, too, fear the racism and the irrationality we find all around us. But some new ideology hardly seems to be what is needed.

Strikingly, the two ideas in which we see most promise — democracy and science — are wholly missing (at least in the Times’ brief version) of Bell’s lament, which also appeared in Wilson Quarterly.

Democracy is not very romantic; it is only a dream of an equitable way that disparate people can live together. Science seems promising not just for the goods and services it offers — but as a rational creative form of human expression whose possibilities have only begun to be tapped.

This is where the Euro-intellectuals have failed. They can’t see that the world, as intelligent people understand it, has changed — been revolutionized — in the last 50 years by science, by nuclear physics and its offshoots, and by molecular biology and its many fruitful outspurs among others. Even as the environment has been degraded, in part as the fallout of these discoveries, vast amounts of new information have been produced about life, the earth and the universe — and about humankind. Best of all, much of this knowledge requires structuring and understanding, which is an intellectual process that the scientists themselves are not trained to provide.

What an opportunity! But, rather than seize it, intellectuals like Bell have huddled in their academic towers; thus far they have not wanted to do the work to understand, shape, and use these new scientific findings.

First, however, intellectuals have to sense the excitement of scientific discovery as a creative process. They need to let themselves be intrigued by research — which is a quest for the Grail, only somewhat differently understood. To do so, however, they will need to take the time and the not inconsiderable effort to learn to read science. Then they can analyze and interpret it — and employ their skills to relate scientific information to the social and cultural concerns of the day.

Limits Must Be Clear

It will help, of course, for these intellectuals to have some clear sense of what science can and cannot do. It can provide useful — often life-saving information and products. It sometimes can indicate what won’t work, and may be able to say what will.

Science cannot provide answers about what is right and what is wrong! It is not a religion. It does not impose a meaning on life. But it does radically undercut the irrational belief structures upon which many other meanings are based. This is one of its redeeming values.

If science cannot replace the “old ideologies” Bell pines for, then what will? Looking around us, we see a democratic and egalitarian agenda rusting from disuse and neglect — enough meaningful work ahead for a generation’s effort.

Bell disdains these democratic obligations, under the sneering rubric “melioristic liberalism.”

We think it is far more important to feed, clothe and house people, and challenge them — and especially their children — with hope and with work than to lament the growing irrelevance of the “utopianism and universalism … that framed intellectual life during the past 200 years in the West.”

Time to move on, we say!

Science = Creativity + Daring

“[S]cience is a creative subject. The new idea, the working hypotheses, the novel experimental arrangements … are all the result of intellectual jumps and of original thinking, and not of logical deduction or inference …

“There is no possibility of defining a ‘scientific method,’ a prescription that anybody can follow …

“Scientists have to be people of flesh and blood, of passion and drive, of daring and courage … It is unfortunate that in some places the absurd image of the cold, passionless scientist is still propagated.”

— Sir Hermann Bondi, Cambridge University (Nature, July 30)
Scribes Smitten by Vitamania Aid

Exposés through the years have made nary a dent in the largely useless, but very profitable vitamin traffic.

What now may be different is that prominent science writers are spreading the vitamin gospel in very prestigious publications. They insist, however, that they are disseminating health information, and certainly have not been conned into promoting vitamin tabs and caps.

Thus it was that after we published our report (May) on how vitamin B.S. in the New York Times and Time magazine was boosting sales, we picked up a brief, annoyed phone call on our tape from Pulitzer Prize-winning science writer Natalie Angier. She objected to our suggesting that her panegyric on vitamins (Times, March 10), based on an industry-sponsored conference, served the vitamin industry’s agenda — at a high cost to consumers and science. As we recall, Angier assured us she has followed the vitamin story carefully and long. She chided us for our poor journalistic practice in not phoning her first, for comment. Then the tape ran out.

Story was Liked

We didn’t phone back, and don’t regret not calling in the first place. Angier, after all, had held forth for a couple thousand words, in a syndicated news story read by millions. But she had not felt enough need for journalistic balance to quote any expert who disagrees with her thesis, and the industry’s, that vitamins may be the key to longevity and health.

We had, in fact, covered for our story a didactic hour by Angier on how science writing is done; she delivered it at Rockefeller University in Manhattan. She told her audience — mostly awed young scientists — that Times readers really liked her vitamin piece. Given her enthusiasm for their enthusiasm, we were a little surprised when her lecture showed up in print, in our professional publication ScienceWriter (Spring), with this choice bit of braggadocio deleted.

Still, we couldn’t help wonder if we’d been a bit too harsh in suggesting that Angier and her Time colleague, Ms. Anastasia Toufexis — who wrote an even more rhapsodic cover story (April 6) on “the real power of vitamins” (also in the August Reader’s Digest) — were, inadvertently of course, boosting vitamin sales. We felt a twinge of remorse!

Happily for our conscience, there then crossed our desk the May newsletter of the Committee for Responsible Nutrition (CRN), a trade group of the nutritional supplement industry, in Washington, D.C. Exclaimed CRN News’s banner headline: “Time, New York Times Tout Value of Vitamins, Minerals”

Now, to tout, says our Webster’s II, is “to solicit [or] importune.” So if the commercial beneficiaries of these stories see them this way, then of course why shouldn’t we!

Promotional Value Cited

A second trade group, the National Nutritional Foods Association (NNFA), in Costa Mesa, Calif., has been ecstatic about the Time piece.

“Quite simply,” it said in an April 22 mailing, Toufexis’s story “is the most positive and powerful public relations tool that the industry has been able to use in years. The article will help establish credibility in the mind of the public [sic] to many of the health claims that our industry has been making for 50 years .... This is a terrific opportunity for our industry to make headway with the general public and the decision-makers in Washington.”

This group clearly sees no need whatsoever to wait upon science to validate the unproven claims that Time touts.

The NNFA did have one complaint: Time “refused” their request to reprint the article for distribution in members’ health food stores.

Copies Available

Two months later, however, NNFA wrote again to members, enclosing 20 free full-color Time reprints, made available through “efforts” by a member of its board.

“Many of the products mentioned in the article are sold in your store,” NNFA executive director Patricia Heydlauff declared. “These reprints will serve as an effective tool for promoting products in your store.”

Additional copies, she said, could be purchased for 18¢ in bulk. The order form read: “By distributing copies ... to your customers, you will ... help your ... association’s political power as well!”

The mailing added this news: “The author of the widely read Time article,” Ms. Toufexis, “will be speaking at the NNFA annual meeting and trade show,” in Nashville, Tenn.

# # #

A large, and — surprisingly — not altogether friendly crowd of health food sellers showed up at 8 a.m. on a July Saturday morning to hear Toufexis. She told them, proudly, that her piece is Time’s best-selling cover story this year. “It whipped off the sales racks,” she said.

“For me, on a personal level, the article marked a radical shift in how I’ve always viewed vitamins,” Toufexis explained. “I’ve been a vitamin atheist, convinced that there was no good reason to take supplements,” she said, “But about a year ago I began to get confused.”

Ideas Changed

On one hand, the “official guardians of American health” continued to bad-mouth vitamins, she said. But, “every few weeks I’d see another report that suggested that vitamins were intimately linked to thwarting cancer or heart disease and so on”; the reports had “reputable” sources. The more she dug into the subject, the more intriguing vitamins became. By the time she had written her story, she said, she, like some colleagues at the Times, “had changed”...
Industry

her mind. Now, she said, she’s “a vita­
min agnostic.”

She said, referring to PROBE, that she
found it “odd” to be depicted as the
“subtle dupe” of vitamin industry PR.
She said she had tried hard not to “in­
flate” her story, and came very close to
succeeding.

(Our view is that there was nothing
subtle at all about the story, or the pub­
lished results: Besides the cover picture,
which shows a glowing array of vitamin
pills, there is a strikingly sharp photo of
two grandmotherly women shopping for
vitamins, and a huge photo of a younger
woman spooning up vitamins from a soup
bowl — but no such photo of broccoli
eating. We’d score this somewhere be­
tween vulgar and crass. Toufexis has
reminded us, in a phone interview, that
news magazine writers don’t pick the pic­
tures or write the headlines. But of course
they do write the stories upon which pic­
tures, headlines and captions are based.)

Straight Talk Offered

Her own report notwithstanding,
Toufexis — to her credit — told the
supplements merchants that they and the
media are not going to be friends: Many
journalists see the industry as only one
purposes.

That was using her work for promotional
support the industiy.

But I can’t control that.”

She

says vitamins can be obtained in food.

ốmer- not say take vitamin supplements.” It

says, she maintained. “The article does
not say take vitamin supplements.” It

says vitamins can be obtained in food.

These remarks did not go down well.
Our reporter on the scene says:

“The entire crowd was very hostile.”
She was “taken aback” by the hostility.

Later, in a phone interview, Toufexis
said, “I think it’s obvious that they’re
using [the article] to promote their sales.
But I can’t control that.”

We asked if she thought it wise to talk
to and accept an honorarium from a group
that was using her work for promotional
purposes.

“I was free to say whatever I wished
to say,” Toufexis replied, “and it was
cleared by my company.” She declined to
say how much she was paid for her 11­
minute speech plus Q and A.

Meanwhile, the brouhaha on vitamin
coverage has won notice at the Living
Section of the Times (June 24), where
critic Marian Burros wrote a piece chid­
ing vitamina makers’ PR efforts.

Issue Explored

What Burros did not mention was that
one of the more reckless stories — Natalie
Angier’s — had appeared in the Times.
In fact, the paper of record had published
two such pieces, the other by Rick Weiss,
who is Angier’s husband. The headline
on his New York Times piece (March 25)
says a storm “rages” over a change in
nutrition listings on food labels that the
U.S. Food and Drug Administration (FDA)
has proposed.

Are Supplements Needed?

The FDA, like the National Academy
of Sciences — which sets the U.S. Rec­
ommended Daily Allowances (RDAs),
upon which FDA’s food label rules are
based — has decided that many of these
“allowances” are too high: Most Ameri­
cans need less vitamin supplementation
than has been recommended, not more.
Over-supplementation, particularly with
iron, is dangerous to some people. Add­
ing unnecessary vitamins of course pumps
up the cost of vitamin-enriched processed
foods that virtually everyone eats.

Weiss quotes vitamin advocates’ fear
that FDA’s proposed new rules — which
are supported by the American Dietetic
Association, among others — could
harm Americans’ health. He cites, as an
example, an NAS-FDA proposal to lower
recommendations for the vitamin biotin
by 80%. But what Weiss neglects to
mention is that nutritional deficiency in
biotin never occurs in Americans who
eat solid food — unless they consume
prodigious amounts of raw egg whites!

Risks Cited

What Weiss also neglects to say is
that a huge table of NAS/FDA proposed
reductions that the Times published with
his story, and much of the critical mes­
gage in his text, comes from a bastard
publication that was neither peer-re­
viewed nor published in a scientific jour­
nal. No publisher is listed on it. So it
lacks scientific credibility. This source,
rather, is a “position paper” written by a
Tufts University nutrition researcher, Jef­
frey B. Blumberg, Ph.D. It makes the
alarming, but unproven, claim that FDA’s
continued on page 8

Food and Drug Laws Protect the Public

The Food, Drug & Cosmetics Act defines any substance claimed to prevent or
relieve symptoms, or cure a disease, as a drug. A manufacturer must prove,
scientifically, that it is safe and effective in order to sell it.

The vitamin industry and its constituents succeeded, a decade ago, in having
vitamins redefined as nutrients, not drugs. This freed the industry, to a large
degree, from regulatory constraint.

Last year, however, President Bush signed a new law, the Nutrition Labeling
and Education Act of 1991. It is the legal basis for the proposed lower daily
vitamin and mineral listings — now called Reference Daily Intakes, or Daily
Values — that the industry is vigorously fighting, using the Time reprint as
ammun. The new law also strengthens FDA’s hand in banning the injection or
sales of high-dose vitamin concoctions for unproven health claims.

Few such claims — that vitamins prevent heart disease or cancer, for
example — have passed the test of science. Most are nowhere near passing.
But the industry and its adherents don’t care.

“FDA simply wants too much evidence before approving a health claim,”
complained Health Store News in its April/May issue.

Of course, allowing vitamin sellers to continue marketing their products based
on unproven claims encourages other medical fringe groups and industries
— naturopaths, herbalists, and the like — to do so, too. They are.

The predictable result: subversion of the FD&C Act and related laws, and
their replacement by a “health” marketplace with no meaningful regulations or
reliable consumer protection standards.
vindication in the prosecutor’s decision to drop the case.

The main speaker, Harvard microbiologist Davis, said that Dingell had been “very tempted” to enter the controversy because “he had caught a very big fish, a Nobel prize winner, who would get much more attention” in the press than some lesser alleged scientific defrauder she has pursued. Davis warned: “We’re not dealing just with a neutral group trying to decrease the amount of misconduct [in science], and achieve justice."

Rather.

“I think it would be naive not to recognize that we are in a battle with opponents who are determined to dictate major changes in the style of science.”

The prosecutors who declined to indict her nevertheless took a parting swipe at Imanishi-Kari. They said they thought she was guilty, but feared they couldn’t convince a jury because of the intricacy of the *Cell* paper data and the difficulty of proving corrupt intent — for which they appear to have had little or no putative evidence.

“If any of her results were true,” assistant U.S. Attorney Geoffrey Garinther declared, “a juror might have had trouble finding beyond a reasonable doubt that she had corrupt intent — that she had intended to mislead with experiments that achieved results that could not actually by achieved.”

Reasons Adduced

The prosecutor was also impressed by a challenge to the forensic evidence that was the basis of his putative case (See adjacent story). But there were other reasons to doubt there was fraud: Microbiologist Davis offered several such reasons why, in his view, “it didn’t seem to me very likely” that Imanishi-Kari committed fraud by deliberately faking research data:

• “If you had to publish something that you knew was built on fraud, would you put your next post-doc [O’Toole] to work on it” as Imanishi-Kari did, he asked. “That’s not the way the historic cases of fraud have worked out.”

• If a researcher wanted to “set the world on fire with a great discovery,” said Davis, he or she would not choose a subject like the one in the *Cell* paper, where you end up saying, “‘Maybe it’s this, and maybe it’s that — we really don’t know what’s going on!’” One would come up with a single, firm conclusion instead.

• One would not, finally, pick a subject where the data forced one toward a conclusion that already was widely known, and rejected, in the research community — as was so in this case.

(Readers may recall that we have shown [PROBE October, December, 1991] that Imanishi-Kari’s experiments, however sloppy or faulty they may have been, yielded scientific results that have in part been confirmed and extended by others. This is powerful contextual evidence, which persuaded us that the experiments were not fraudulent.)

Despite errors, some of which Imanishi-Kari has acknowledged, Davis thinks the *Cell* paper is valid. He said she has written two follow-up papers, and submitted them to journals. He and Imanishi-Kari, in telephone interviews, both declined to say which journals.

Davis, who is not an immunologist, added that knowledgeable colleagues who are immunologists “all agree” that the papers are important. They also provide a “very substantial” reinterpretation of the earlier data, he said, “which always is the way in science.” He said Imanishi-Kari is “in a much stronger position scientifically than she was before.” Underly-
August 1, 1992

Corrections Not Needed

There were errors in the Cell paper, Davis said. Until he finally retracted the paper, he added, Baltimore’s position was, Why should he be forced to do what he didn’t feel it necessary to do! (Imanishi-Kari never retracted it.) Baltimore retracted the paper with the proviso that he would retract his retraction if the charges proved unfounded.

Baltimore has since ‘muddied the waters’ by writing to Cell to re-retract the paper, Davis said. But, he told his colleagues at the MBL, if they thought the paper was valid, they would do what Baltimore has done.

The real issue, Davis concluded, is how research is to be done:

“Science tends to be very forgiving if people are sloppy, or even if they have nasty characters, or if they are too stubborn,” he said. “Nevertheless, if they are creative, they will be supported — and will be highly respected.”

Not, apparently, by O’Toole, who now works at the Genetics Institute in Cambridge, Mass., or Congressman Dingell and his supporters — who, Davis said, seem determined to impose a new and stifling rectitude on the practice of science.

One View of Why It Happened

“The heart of this tragic case is that these people [Imanishi-Kari, Baltimore and their co-authors] encountered some radically new and speculative immunologic findings. These findings did not fit into classical expectations of what the antibody’s specifications should be.

“They had the misfortune to have a very concerned, idealistic, intense post-doc [Margot O’Toole. She] didn’t like to live with uncertainty — and couldn’t feel comfortable unless the data fit into her preconceptions about how they ought to be.”

— Harvard microbiologist Bernard Davis
new proposals — called Reference Daily Intakes, or RDIs — will "contribute to a marked downgrading of the nutritional quality of food products ... [which] could result in an increased risk of nutrient shortfalls for a significant percentage of Americans."

Industry Helped

Based on an interview, journalist Parke Wilde, writing in the May 22 issue of the newsletter *Nutrition Week*, (under a grant from the Fund for Investigative Journalism), reported:

"Blumberg's document was printed and posted by the CRN ... at the industry's expense ... Blumberg says the trade association provided 'logistical support' worth '... a few thousand dollars — relatively insignificant,' and it also compensated him for another article and a speech at its annual conference.'"

##

We don’t think reporters who write scientifically unsubstantiated gushes about vitamins are deliberately trying to boost vitamin sales. But they may be naive.

They haven’t learned — or reject the notion — that the media is the message. So a major uncritical story, even if studded with "mights," "mays" and other qualifiers, is going to be read for its usage value — as an encouragement to buy and use supplements — rather than simply as information.

Writers thus have to ask themselves if a story that carefully weighed the pros and cons, would serve readers — if not vitamin makers — better. The critical story, of course, might not land on the cover or get whipped off the racks.

Larry Blaser, in Nashville, contributed to this story.

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