

counting defense) was during the New Deal. It did build many fine projects, and it helped hundreds of thousands of individuals. It had little if any lasting effect on the economy as a whole.

The last counter-cyclical experience occurred during the recession of 1982-83. To help the unemployed and help stimulate a flat economy Congress threw a few billion into public works and expanded unemployment benefits.

There is nothing in this proposed amendment that would bar Congress from taking such modest steps again. If a crisis like the Depression occurred again, a three-fifths majority in each house could bypass the amendment's spending restrictions.

If there were a crisis, the people would respond just as they did in the 1930s. They threw out a catatonic GOP and installed Democrats, giving them a three-to-one margin.

The Democrats are on the wrong side of this one. Balancing the budget is a liberal concept, in the classic sense of the word, liberating.

Interest on the debt nearly equals all the government spends on discretionary programs, such as disease control, transit, research, aid to cities, education and foster care.

Interest payments are crowding out aid to the underprivileged just as much as entitlements. Interest payments go to people rich enough to buy government securities in \$10,000 and \$100,000 lots—not exactly the guy in your neighborhood Legion hall.

It is a loser for the Democrats on demographic lines. It is the young voter—not the aging one—that is going to pay and pay and pay to get this debt off his back.

For every sophisticated argument against it, there is an even stronger common sense argument for balancing the budget—sooner than later.

The people aren't dumb.●

HOMICIDES BY GUNSHOT IN NEW YORK CITY

● Mr. MOYNIHAN. Mr. President, I rise to continue my weekly practice of reporting to the Senate on the death toll by gunshot in New York City. Last week, 12 people lost their lives to bullet wounds, bringing this year's total to 107.●

ALLEGATIONS REGARDING POTENTIAL NUCLEAR EXPLOSIONS IN A GEOLOGIC REPOSITORY FOR SPENT NUCLEAR FUEL

● Mr. JOHNSTON. Mr. President, last Sunday, the New York Times published a front-page story alleging that geologic disposal of spent nuclear fuel in Yucca Mountain could result in an "atomic explosion of buried waste." The story is based on a hypothesis proposed several months ago by two scientists at the Los Alamos National Laboratory, Dr. Charles D. Bowman and Dr. Francisco Venneri. Drs. Bowman and Venneri, neither of whom is a geologist, performed some crude calculations on what might happen to plutonium in a geologic repository. They assumed that 50 to 100 kilograms of pure plutonium-239 would slowly diffuse through nonabsorbing silicon dioxide—not any type of rock actually found under Yucca Mountain—and then

gradually reach criticality as various neutron-absorbing elements in the nuclear waste diffused away over the millennia.

We have been told by the New York Times and by both Senators from Nevada yesterday that three teams of scientists at Los Alamos "have been unable to rebut the assertion" of Drs. Bowman and Venneri. This is simply not true.

The Los Alamos National Laboratory, in fact, did respond to these allegations. It formed three review teams. A "Red Team" was set up to serve in the role of skeptic. A "Blue Team" was set up to take the role of defenders of the Bowman-Venneri hypothesis. A "White Team" was set up to serve as a neutral judge of the work of the other two teams, and to render an overall judgment as to which was more credible.

What was the conclusion of the White Team? I ask that a two-page "Summary Critique of Bowman-Venneri Paper by Internal Review Groups at Los Alamos," which was publicly released yesterday by the Los Alamos National Laboratory, as well as the complete text of the White Team report, entitled "Comments on 'Nuclear Excursions' and 'Criticality Issues'" be printed in the RECORD at the end of this statement.

The White Team report is a devastating critique of the hypothesis of Drs. Bowman and Venneri. It states that:

The geological situations in the Bowman paper are too idealized to validate the proposed scenario.

The assumption of significant plutonium dispersion into the surrounding medium is without justification.

The amount of water is overestimated by a factor of 1000. . . . There is no steam explosion.

The assumptions about the behavior of the fissile mixture near criticality are not credible.

There is no credible mechanism for releasing energy on a time scale short enough for even a steam explosion.

Even when the White Team started assuming that the impossible would happen, it still could not find the Bowman-Venneri hypothesis credible. For example, the White Team concluded:

Even if dispersion and criticality are assumed (which is strongly objected to), the conclusion that an explosion would occur is incorrect.

Even if dispersion, criticality, and energy release are assumed, there would be no serious consequences elsewhere in the repository or on the surface.

The florid story in the New York Times and the comments made on the floor yesterday by my distinguished colleagues from Nevada illustrate vividly how to misuse science in public policy debates.

Step No. 1. Ignore peer review. The New York Times clearly knew that an internal laboratory review of the Bowman-Venneri hypothesis had taken place, but got the story of that review completely wrong. Is there any way to characterize the above statements as being "unable to lay [the Bowman-

Venneri hypothesis] to rest," as the New York Times reported? I don't see how. And, of course, no external review by a scientific journal of this paper has taken place—it isn't even clear whether Drs. Bowman and Venneri have submitted their calculations to any journal, other than the New York Times, for consideration.

Step No. 2. Do not even bother to get your facts straight. The true story of the internal Los Alamos review of this paper was readily available yesterday to any Member of this body who would have taken the time to call anyone at the laboratory whose name was mentioned in the New York Times story.

Step No. 3. Just jump on any news story that seems to support your preconceived view. Blow up the headline into a big chart, and head directly to the Senate floor.

Unfortunately, this is not the first time that we have seen bad science injected into the debate over a permanent geologic repository for spent nuclear fuel. In 1989, another DOE scientist named Jerry Szymanski interpreted some mineral deposits adjacent to the Yucca Mountain site as evidence that ground water repeatedly had risen well above the level proposed for the repository in the geologically recent past. If such an event were to occur in the lifetime of the repository, it would flood the waste packages and could result in a release of radioactive material to the environment. But before this hypothesis could be properly reviewed by other scientists, Szymanski's report became a media sensation fueled by, among others, the New York Times. Eventually, a distinguished group of scientists from the National Academy of Sciences was asked to evaluate Szymanski's interpretations and the data upon which he had based those interpretations. This panel concluded what the vast majority of DOE and U.S. Geological Survey scientists had concluded already: that the mineral deposits were produced by rainwater at the surface and had nothing to do with fluctuations in the ground water table at all. That was in 1992. Notwithstanding the NAS conclusion, the State of Nevada continues to pay large sums of money to Szymanski, now an independent consultant, to continue beating a dead horse.

So let me respond in detail to the specific charges made yesterday by my distinguished colleagues from Nevada.

The distinguished junior Senator from Nevada charged that a "discussion has been going on for months and months and months" involving "three teams comprised of 10 scientists—that is 30 scientists [that] have been unable to rebut the assertion that there is a genuine fear that an explosion can occur in a geologic repository." In fact, the scientists at Los Alamos were able to rebut the assertion, and did.

The distinguished senior Senator from Nevada complained that the Bowman-Venneri hypothesis had not been