patrimony, but if they choose to destroy it we should not help them do it.

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Cold Fusion Results

Robert Pool, in his description of the positive report issued on cold fusion by Texas A&M University (News & Comment, 14 Dec., p. 1507), states that my co-workers and I have not obtained tritium over the last year.

1) Since our pioneering work in discovering the formation of tritium at the palladium electrode in the electrolysis of deuterium oxide at palladium, 37 independent groups have replicated our work qualitatively, that is, they have found the formation of tritium when deuterium is electrolyzed on palladium.

2) Thomas Claytor, at the Los Alamos National Laboratory, by using an entirely different method from the one we have used, can reproducibly produce tritium from the passage of current through palladium charged with deuterium (*1*).

Correspondingly, Pool reports that I restricted the timing of Manuel Soriaga's questioning of Nigel Packham at Packham's Ph.D. oral without stating that this procedure (requesting Soriaga to submit further questions in writing) was advised by the Graduate School Representative, or that two persons (Norman Hackermann, and Ernest Yeager) had been appointed to Packham's committee because both were experienced in cold fusion work (Soriaga was not).

Reporting of a selected part of the situation may sometimes confuse the reader.

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REFERENCES

1. T. Claytor, paper presented at a conference on Anomalous Nuclear Effects in Deuterium/Solid Systems, Brigham Young University, Provo, UT, 23 October 1990.

Response: The report of Texas A&M's Cold Fusion Review Panel itself states that unusually high levels of tritium were observed in Bockris's lab through November 1989, but that "Since that time, no additional cells have been reported to have unusual levels of tritium. . . ." The 37 "independent" groups to which Bockris refers include many that have seen small amounts of tritium once or twice and never again.

As for the handling of Nigel Packham's dissertation defense, the review panel stated that "A very serious breach of academic procedure may have [occurred]." The report states that "While the Graduate College Representative functioned reasonably in a difficult situation, he was not privy to many of the events leading up to the defense," and it pointed out that "It was the duty of the committee chairman [Bockris] to see that the examination was conducted properly." The panel was unsatisfied with the final composition of the dissertation committee, even after the addition of Hackerman and Yeager: "The addition of outside experts [to a dissertation committee] can obviously be of value. While some were added in the case in question, experts in nuclear science were notably absent. . . ."—ROBERT POOL

Units Unite!

Bernard M. Oliver (Letters, 2 Nov., p. 611) rejects metrification with historical and other irrational arguments for using both metric and English units. One argument is that the constants of physical laws are not even units. Nor are they in the English system. This point is a red herring. A second argument—that a pocket calculator can convert among English units as easily as moving decimal points—ignores the knowledge required to convert. A foot is 12 inches, but a pound is 16 ounces (well, 12 troy ounces). A mile is 5280 feet; a pace is 5.28 feet or 63.36 inches. A third argument, the need for a wealth of units, is also flawed. With which English unit should one estimate microscopic distances? Perhaps 1/1,000 or 1/10,000 inch—this looks suspiciously metric. The alleged Big Brother effect of metrification seems pale. Does Oliver believe that package weights from candy bars to box cars are not legislatively directed? Finally, did the English invent the units of galaxies, stars, worlds, and light-years?

One thing seems certain: relieving the burden of multiple measurement systems by using metric prefixes that carry the same meaning across differing units seems attractive, even rational. Further, who can resist the cuteness of metrification? If I see many more letters such as Oliver's, I will have to again indulge in 10^{-15} bismols (that's 1 femtobismol).

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Oliver makes linkages where none exist between American competitiveness and our failure to adopt the metric system. True, America's past dominance of the world economy came about from hard work and quality products, and depended in no way on the system of measurement used—but that dominance was achieved at a time when Europe was fragmented by wars and Asia was just emerging from semifeudalism. It was also achieved with slide rules and log tables, and no one can reasonably suggest that we return to the political, economic, or technological realities of that long-gone age.

The issue now is not whether we can recapture our position by brute force, it is whether we can prosper in a world whose economy is increasingly integrated and multipolar. Part of that integration involves the use of common standards, including measurement. The United States is the only industrialized country not officially committed to metric measurement, and no amount of hard work or emphasis on quality will help to sell products that are at best incompatible, and at worst illegal, in the rest of the world.

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Oliver does not wish to forget that "a pint's a pound the world around," but this is not true and is taught only in the United States. In the empire on which the sun never set, the Imperial pint was defined by the phrase "a pint of water is a pound and a quarter," as were "five and a half yards one rod, perch or pole." Standardization by use of the metric system is much more efficient than remembering these and many other anachronisms.

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Like Oliver, in my engineering work I have for 40 years used whatever unit of measure my clients preferred. It makes no sense to advise a U.S. homeowner how to save energy in a report that measures temperature in degrees celsius, distance in meters, and fuel oil in liters, but for an international audience, I would probably use these International System of Units (SI) units. When a "metric" fanatic (usually a physicist) mocks my use of British thermal units, square feet, cubic yards, and 1/2-inch pipe, I ask "What time is it?", "When were you born?", and "Can you lend me a quarter?"