dressed to the definition of remedial courses, important as that matter is, but, rather, to the question of awarding college credit for such courses, however defined. Dean Beach's recommended definition is a good one, and it could be made operational by utilizing proficiency tests and counseling interviews as a replacement for, and an extension of, entrance examinations.

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Emergency Core Cooling

The interesting reports by Robert Gillette on nuclear safety (News and Comment, 1 Sept. through 22 Sept. 1972) move me to comment. I agree with critics that the LOFT project has been set back by misguided direction, both from Idaho Falls and from Washington, D.C.

The question of emergency core cooling, now claimed by some to be the principal safeguard against cataclysmic reactor plant accidents, has gotten completely out of hand. In the early days (before 1960, more or less), the basic safeguard was containment. Emergency core cooling was introduced to prevent fuel rupture or melting in the event of a rupture of the pressure parts of the reactor system. The idea was to reduce dependence on the outer containment structure. There were even those who contended that such a system might permit the elimination of this containment. In a sense, emergency core cooling is like a parachute for an airplane in case the wings fail, or like a fourth leg for a three-legged stool. Uncertainty about the functioning of emergency core cooling should not cause panic about the safety of water reactors.

Rather than spending huge sums and instituting crash research programs, it might be better to evaluate the chances of primary system failure more carefully and institute means to increase the reliability of the system's pressure parts. If we think pipes might fail, we could use multilayer or composite construction, such as wire wrapping. If we think vessels might fail, we could consider layer-built or prestressed concrete as an alternative. In designing airplanes, we ensure against wing failure rather than depend on parachutes. It would be better to abandon elaborate emergency core cooling systems and use them only to deal with small leaks. The systems in current vogue are very much "Rube Goldberg" designs. We should depend more on pressure parts.

If information on emergency core cooling could be developed in the the meantime, without crash programs, without irrelevant questions about quality assurance, and certainly without hysterical reports that say "This test failed. All is lost," it would be of value. We could then decide whether it was worth it to put a fourth leg on the stool.

It is inappropriate to suggest conflict of interest on the part of professionals in industry, who, to a man Jack, have public safety foremost in their minds. Perhaps the scientists who are suspicious of industry should read the Canons of Ethics for Engineers (*1*). Could the conflict of interest charge apply more to researchers who see their work and status threatened by the abandonment of gigantic research projects?

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References

1. Engineers' Council for Professional Development, *40th Annual Report, 1971–72* (Engineers' Council for Professional Development, New York, 1973).

Clarifying Differences

The comment by Deardorf (Letters, 22 Dec. 1972, p. 1240) that organically grown foods taste better suggests that there might be a chemical difference between organically and nonorganically grown foods. A panel of tasters combined with a team of biochemists should be able to clarify the question rather easily. I offer my services as one of the tasters.

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Hedges and Deardorf are the soul of reasonableness in their defense of "organic gardening," and we all could applaud if the movement's main concern were the misuse of technology. But for the more fervent members, the spiritual leaders, its thrust is far more than that; it is antiscience. It is an integral part of the counterculture package along with astrology and other mysticisms.

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