Letters

Agricultural Aid to Underdeveloped Countries

It seems to me unfortunate that J. G. Harrar [*Science* **133**, 671 (1961)] concludes an excellent exposition of the role of research in promoting the 20th-century revolution in agriculture with a rather negative application to the underdeveloped countries of the world. He agrees that massive application of modern technologies could theoretically eliminate hunger, but he considers such application impossible in practice because of the lack of trained people to do the job. Education and training undoubtedly are necessary, and Harrar's words of caution are timely and well chosen. But must we wait until the gap is completely filled, and must the job necessarily be done on a massive scale?

Agricultural research in the United States began on a very modest scale and developed as the needs and opportunities became apparent. We now have extensive basic research and "highly sophisticated groups" of researchers because this early, relatively simple, inexpensive research was successful. Harrar probably would not characterize the Rockefeller agricultural improvement program in Mexico as massive, yet it has been eminently successful. A few years ago the United Nations, in cooperation with others, undertook to introduce hybrid corn into the corn-growing countries of Europe. Based on the concept of developing hybrids adapted to each country rather than on the use of United States hybrids, and directed by a modest amount of research, this effort also was highly successful, and relatively inexpensive.

Much of our current effort to improve agriculture in foreign countries consists of education of one kind or another, under the general heading of agricultural extension. Some of it has been less than conspicuously successful, not so much because it is not massive as because it has not been supported by research in the countries concerned. Most agricultural authorities agree that improved practices developed in the United States cannot safely and easily be transferred to other countries with different climates, soils, and economic conditions. Yet that is precisely what we have attempted to do in many cases, with nothing better to go on than experience in the United States. The result is suspicion and lack of confidence on the part of those we hope to help, and frustration on the part of those trying to do the job. One failure as a result of promoting an unsound or poorly adapted practice may offset the effect of a dozen successes. It seems to be but dimly realized that education, so far as it relates to agriculture, must be based, to be effective, on reliable, practical information of a sort that simply does not exist in most of these countries.

Agricultural research in the underdeveloped countries must, for the most part, be supported and conducted by the countries themselves. We can probably give most help by demonstrating the need for, and the value of, research, and by helping to train personnel to carry it out. Both efforts are essentially long-term rather than massive programs. Perhaps they should be patterned after similar programs in the United States, but above all they should be in accord with the capacity of the country concerned, and with the conditions that prevail in that country. What is needed, for the most part, is simple, well-planned experiments designed to solve the problems of immediate practical importance, conducted at enough places and for long enough periods to assure reasonably dependable results. So-called basic research can usually be deferred. Such practical research requires good over-all direction but not large numbers of highly trained people.

It is a strange fact that, although the need for an improved agriculture to alleviate hunger and to advance the economy in most underdeveloped countries is generally recognized, only a small proportion of foreign aid is devoted to either education or research in agriculture. The subject is sufficiently important to justify a positive rather than a negative approach.

S. C. SALMON

4103 Roanoke Road,
Hyattsville, Maryland

The editorial "Unhappy paradox" had such a familiar ring to it that I thought Harrar might be aware that I had written an article called "Paradox in paradise" for the *Journal of the American Institute of Architects* (September 1960).

The solution proposed by Harrar is in line with my own recommendations made after spending a year in an "underdeveloped area" as housing adviser to the government. However, I would like to suggest a different emphasis in the context of the educational process he advocates.

The peoples in the areas he has in mind are old culturally—much older and, in a sense, wiser than we are. They have, in common with all elderly people, a resentment of youth's temerity in assuming the role of teacher and the "mother knows best" attitude which our ICA missions are prone to maintain despite strong evidence that it won't work. Among other famous students of cultures, Margaret Mead has tacitly admitted that the problems associated with the paradox Harrar—and I—described cannot be readily resolved, and that the only attitude to be taken is one of patience (difficult in the face of Russian aggressiveness).

My own approach was based upon the sincere belief, acquired through being in the underdeveloped country for a few months, that the people there had much more to teach me than I had to teach them. I was then often able to offer the bits of technological information which might prove to be of some value. When the people wanted a college built I asked for instruction in *their* styles of building and *their* orientation for each of the buildings on an entire campus which I eventually was asked to design.

Peoples who have, for centuries, based their lives on human values we too often find only in textbooks or in a Sunday morning sermon cannot be convinced by precept that they "need" us or our knowledge. They can be forced to accept our bread and circus handouts, but the last ten years of American philanthropy seem to indicate that our approach is not amusing for very long.

I think one of our difficulties can be

traced not to the motives of the American people but to the motives of the people we send out to administer our foreign programs. We technicians may know how to work with people, but the administrators, mostly political appointees, know only how to work people in order that the sinecures garnered may be perpetuated. They survive chiefly because there are counterpart bureaucrats in the host country who have similar motives. The results are tragic both for the American taxpayer and for the natives he is trying to help. Another tragic consequence of the American political spoils system is the high regard native people begin to have for the Russian approach to their problems. This was described in the New York *Times* of 5 January 1960 by W. W. Kenworthy. He discussed the direct approach of setting up projects with specific objectives scaled to the understanding of the natives involved, as opposed to the grandiose million-dollars-be-damned approach of the Americans. The Russians try to impress the people affected; the Americans too often play to the politicians, whose prestige often depends upon how much they can squeeze out of Uncle Sam.

Instead of teaching people, I think we should merely allow them to learn at their own pace and in their own way. After all, as the people we want to help know so well, a way of life cannot be taught, it can only be lived.

MILTON D. LOWENSTEIN
Arizona State University, Tempe

Man on the Moon

It has, apparently, been decided that we shall be remembered as the only nation in history that felt that it could spare $9 billion—but could think of nothing better to do with it than to shoot it at the moon.

There has been remarkably little criticism of the proposal to put a man on the moon. Perhaps everyone is convinced that this is the supreme proof of our faith in science, and that it will be the final demonstration of our competence as scientists. It is not obvious, however, that science will, in the long run, benefit by being identified so closely with grandiose schemes whose real sponsors are the military hierarchy and the missile builders. Any layman or scientist should be able to name at least a hundred better ways to spend the money, and our more sophisticated friends abroad are apt to regard the project less as an affirmation of national determination than as a declaration of intellectual bankruptcy.

Just as a timid suggestion, why not have the AAAS sponsor a contest in which each bright young graduate would list the ten best ways to spend $1 billion.

WILLIAM PALMER TAYLOR
416 Ross Avenue,
Hamilton, Ohio

"Mad-Baiting"

The increasing interest in mental health these days seems to be associated with a rather significant, albeit comparatively unnoticed, political phenomenon—the phenomenon of "mad-baiting." There even seems to be some evidence of this phenomenon in the situation described in your "Mental health in the House Rules Committee" [*Science* **133**, 1468 (12 May 1961)], even though the conclusions are certainly sound.

In "mad-baiting," scientific evaluation of ideas, and of disturbing ideas in particular, is avoided by labeling their promulgators "mad" or "disturbed." Sometimes technical diagnosis, often from afar, lend a veneer of scientific credibility to such *ad hominem* attacks on ideas. Instead of being soberly examined, ideas of this sort are then either ignored or else fought with blind fury, as though the devil himself had created them. Which response actually occurs in a given situation is likely to be determined much more by unthinking, popular attitudes, often prejudicially shaped by the mass media, than by the nature of the ideas themselves.

Scientific method demands, however, that ideas be carefully examined and soberly responded to on their own merits. Only after an individual's ideas have been repeatedly shown to be consistently wrong are we entitled to begin to question either his motives or his stability; even here, however, the term *sick* begs the basic question of whether the errors are accidental or, as with Adolph Hitler, deliberate lies.

Name-calling is an old political tactic. A new pseudoscientific veneer to either "mad-baiting" or "red-baiting" in these psychologically oriented days should not prevent us from recognizing its basically obfuscatory function, and its antidemocratic and antiscientific effect.

NATHANIEL S. LEHRMAN
15 Canterbury Road,
Great Neck, New York