

Letters

Plant Science: Research Orientation

The botanical aspects of the "New grants program in agriculture" (Editorial, 3 Mar., p. 935) are surely welcome, particularly as recognition that plant research is grossly undersupported. But three defects temper one's optimism. Admittedly, these may be more evident to one who, like myself, works in a speciality other than those—nitrogen fixation, photosynthesis, stress, and genetics—chosen for support. For the first point is precisely that those very areas have already had increased attention and support (relatively speaking) in recent years, while topics such as senescence, translocation, flowering, morphogenetic light action, and plant hormones are equally relevant to plant productivity.

Second, much of the legislative material and early publicity on the program—though not, encouragingly, Strobel's editorial—refers to it as "mission-oriented basic research." The implication is of quick practical payoffs. If, as is likely, these are not forthcoming, plant scientists face the equivalent of "Why hasn't NIH conquered cancer?" Third and finally, the fact that the new program is in part supported, as Strobel puts it, "at the expense of older . . . research programs . . ." in the Department of Agriculture can only increase the hostility between the "basic" and "applied" orientations within that institution, a hostility that has long hampered plant research in the United States.

So let us hope the program develops toward supporting research of high quality on all aspects of plant science, and avoids implying that rapid payoffs will necessarily come from a few lines of work. For a reminder of how intimate, yet slow and complex, the relationships between "basic" and "applied" research probably are, all concerned should reread the excellent article "Scientific basis for the support of biomedical science" by Julius H. Comroe, Jr., and Robert D. Dripps, published in the 9 April 1976 issue of *Science* (pages 105-111).

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Computer Therapy: The "Love Letter Analogy"

Björn Palmén's analogy of the love letter (Letters, 3 Mar., p. 934) seems to correct an erroneous impression perpetuated by Weizenbaum (Letters, 28 Oct. 1977, p. 354), after Holden (News and Comment, 7 Oct. 1977, p. 32), that a computer is the final source of what it says. It is worthwhile to be reminded that it is not, that the designer and programmer retain the responsibility for their statements and their effects. But this does not invalidate Weizenbaum's concern over the deceit of using a program that makes the client feel he is interacting with a person.

Continuing Palmén's analogy, suppose that my "love letter" is actually a questionaire in the same way I did. You may be sure that a real person originally wrote the letter; but as a message to me, it is a lie. Whoever is responsible for the programmed dispensing of those words lies in implying that the letter is a personal response to me. It is, rather, a broadcast prepared quite independently of me, motivated and structured by purpose and reason, not by the feeling stated. It is designed to evoke the feeling that someone new loves me, when no one new even knows I exist.

So, while Palmén is right—the computer doesn't really like me—his implication is wrong: the programmer doesn't either. He may think he likes people, but he doesn't know *me*. Still, he does carry the responsibility for his effect on me, though he remains as unaware of that as of me.

Carl Rogers "has identified three . . . conditions [for a facilitator to provide to nurture personal growth]: the ability to listen, authenticity, and 'unconditional positive regard'" (Holden, p. 31). He is unequivocal in indicating that it is the reality, not the appearance, of these conditions that may be helpful. If he is correct, then clearly none of the essential functions of a psychotherapist can be "frozen" into computer programs.

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Teenage Pregnancies

In discussing the proposed increase in the budget of the National Institute of Child Health and Human Development, Barbara J. Culliton (News and Comment, 3 Feb., p. 508) uses the term "epidemic" to refer to teenage pregnancies. This is a scientific term and should be used with caution. The rate of teenage pregnancy may well be increasing, but we do not have a reliable direct measure of conception rates, and not all increases over time deserve the term "epidemic." It would seem safer to focus on age-specific birthrates. They have been falling since 1969 for 18- to 19-year-olds; they were approximately steady from 1970 to 1973 and have been falling since then for the 15- to 17-year-olds; and they have been approximately steady since 1970 for the 10- to 14-year-old group (1). The total number of births to teenagers has been falling since 1970. In the face of these data, the term "epidemic" seems unwarranted. What has been increasing rapidly are society's awareness of and concern about teenage pregnancies.

Culliton also notes that more than half of the estimated 1 million teenagers who became pregnant last year chose to keep their babies. This information is misleading. The Alan Guttmacher Institute (which made the estimate) suggests that more than 400,000 of those pregnancies ended in miscarriages and abortions and less than 600,000 in births (2, p. 10). The figure for 1975 (the latest year for which published data are available) was 594,880 live births to females under 20. But more than half, 354,968, were to 18- and 19-year-olds. Moreover almost 250,000 of these, or 70 percent, were married (1; 2, p. 11). Thus approximately 42 percent of the live births to women under 20 were to married 18- and 19-year-olds.

Many may believe, and we may agree, that childbearing should be delayed until the mother is in her 20's, but there is nothing immoral, illegal, or contrary to this society's values about 18- and 19-year-old married women keeping their babies. Teenage pregnancy is a national problem, but its dimensions should be examined more carefully.

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References

1. *Mon. Vit. Stat. Rep.* 26 (No. 5, Suppl.), 9 (1977).
2. *11 Million Teenagers* (Alan Guttmacher Institute, New York, 1976).