Finally, I did not lump together abortion, euthanasia, and so on because I disapprove of all of them. Instead, I clearly indicated that the one thing they have in common is their biological perspective.

All in all, I wish Baker would comment more on the substantive issues of the article: Are sociobiologists such as E. O. Wilson justified in claiming that sociobiology is a science, that social instincts, territorial types, role differentiation, information flow patterns, and so on can be measured and quantified? And am I correct in assuming that evolution is an additive process in which an advanced stage has some vestiges of previous stages, as in my comparison of the three inputs to the human person and to the cell?

N.S.F. FUNDING: WHO IS ACCOUNTABLE ?

In "The 9.2 Million Dollar Silence" (*ABT* 37[7]:438), William V. Mayer raises the question, "Why has Congress refused to provide needed funding to update American teachers in current content and modern methodology?" The arguments he puts forth to support his questionable point of view are based on emotions and offer little to demonstrate that his assumptions have much merit.

Both the House and the Senate now specifically forbid funding instructional improvement implementation programs, but their refusal of funds for these programs was based on other factors besides poorly selected "titles for projects" and "playful political publicity prods," as Mayer states. Such observations have no more merit than the argument that the MACOS program teaches 10-year-olds about wife-swapping, cannabilism, and infanticide. What the Subcommittee on Science, Research, and Technology was seeking in reviewing NSF programs in precollege science education during the past year was an assessment of the peer review process as it has evolved in federal research support programs. Possibly certain officials of NSF may have demonstrated "a disenchantment with education" during these hearings by specifically not calling witnesses to put on the record how the peer review process has been applied in the area of educational research. In fact, when members of the subcommittee requested information from NSF to clear up this matter they were initially refused it because, they were told, they would not be able to understand the details. It was only the threatened withholding of the implementation funds that finally motivated NSF persons to release the information.

Mayer's accusation that review members appointed by Representative Olin D. Teague (D-Tex.) "had no meaningful background in either curriculum development or implementation and dissemination" is hardly relevant. How many of the principal investigators, directors, and coordinators developing and disseminating NSF-funded education programs have ever had meaningful experiences in these areas? How many of the persons making up the peer review groups assessing education proposals have this background? How many of those monitoring these programs for NSF have had valid experience in these areas?

And then, following these stages, how many NSF-funded programs are being underwritten *because* the commercial sector saw no need for the materials, when, in fact, there is no need existing? In many of the NSF-supported programs, the cronies responsible for selling (or is it disseminating?) the program were responsible for all three phases of the project's development—establishing the need without objectivity, developing the materials without documentation as to their values, and propagandizing the project to the educational community without audits or controls that are meaningful to the program.

The argument put forth by Mayer that "1,700 schools in 47 states" have selected the MACOS program does not mean that a need has been filled. It could very well mean that a multimillion dollar sales campaign financed by NSF funds pressured districts into buying a program for which no need actually existed. It has only been in the heat of belated controversy that several of the NSF-funded programs, such as MACOS, are attempting to establish cases for their projects.

Mayer goes on to say that science knowledge in American schools and in the adult population is declining "because such a negligible amount of money was spent to prepare teachers to handle these new scientific materials," and he cites the figures of $55,300,000 available to NSF for precollege educational purposes in 1968 as opposed to $5,500,000 today. However, the trend in declining test scores began about 12 years ago—before the decrements in NSF funds existed.

Why don't we educators direct more efforts toward systematically assembling materials to produce solutions of a practical nature that might be useful in mitigating this trend? We should do this before we make representations to Congress and the tax-paying public that are more vocal than substantial. Certainly we need the continued support of the public, but we also need actions that will alter ineffective programs if we are to prevent further erosion of federal support for science and science education. The question that we in science education and those officials of NSF with responsibilities in the area of implementation have failed to answer to the satisfaction of the members of Congress is, "Are the current implementation activities conducted by NSF the most sensible and practical way to validate needed curricular changes?"

The present procedures for effecting reforms in science teaching were initiated during a period quite unlike the social context in which education finds itself today. Maybe the procedures by which new programs are orchestrated into our educational systems could be updated, improved, and strengthened by considering alternative approaches rather than taking pen in hand

and writing "to the appropriate congressman" to express our feelings when few if any of us really know the existing situation or have practical ideas about how to alleviate it.

Mayer's attack on Congress's action regarding NSF funds for 1976 is based on the position that a conflict exists "between those desiring to maintain the status quo and those who believe change is necessary to face the future effectively." I have seen no action on the part of NSF, professional educators, or any large group that makes the present implementation procedures practiced by such agencies as NSF accountable to the education community. It is not easy for the taxpayer to perceive why the burden for the decline in knowledge is not directly attributable to the education system. We as educators need to put forth our arguments with reason rather than as emotional and partisan factors if we are to effectuate change. And unless we are willing to be accountable, to disclose our weaknesses as well as our strengths, we are going to continue to be at the mercy of those policy-making individuals who do not have to look for the substantiation of a program.

Elmer R. Seevers
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William V. Mayer comments:

Elmer R. Seevers concentrates on need in his letter which, in turn, makes his needs known. Such expressed needs can then be subject to needs assessment and appropriate steps taken to meet them. Because American education is a diverse enterprise, its needs are varied and no one curriculum or program can satisfy them all. Needs have been expressed by inner city schools, minorities, womens' groups, colleges, school boards, parents, and others. The critical issue is that unless needs are delineated no effort is taken to meet them. The thrust of my October article was to have those interested make their needs known to their appropriate representatives concerning the values of past NSF-sponsored summer and academic year institutes and implementation and dissemination activities. If they are not perceived as needed, they will not be continued. Just as Seevers has expressed his perceived needs, so should those teachers who feel that updating in current content and modern methodology increases their effectiveness make their needs known to the congressional members who have eliminated this segment of the NSF program. The articulation of a need is the first step in meeting it. I urge those interested to follow Seever's example in expressing their needs in the appropriate forum.

Forgetfulness

Blessed are the forgetful; for they get the better even of their blunders.—*Friedrich Wilhelm Nietzche*

Exchange Teacher . . . from p. 93

underclothes was dictated (dark blue). They managed to adjust and did well.

New habits for all of us formed easily, out of necessity. There were no large paper bags for groceries; so we had to remember to take our cloth shopping bags to the store. In the furnished duplex we rented, doors closed off unheated rooms, and a simple timing device turned on central heating at selected times. We got used to smaller cars that get 40 miles per gallon. At first many things seemed small. Eventually, the waste of energy in the United States seemed gross.

We bought a camper (a small converted van) and did quite a bit of traveling in Britain and Europe. We went on sightseeing outings with the Manchester exchange-teachers club. We had dinner with various colleagues and friends (who, in their zeal to provide for the American tastes they had heard of, sometimes had their houses blazing hot and sometimes pressed glasses of ice water upon us as soon as we arrived). My colleagues in the science department at West Wythenshawe College are among my very best friends.

All in all it was a wonderful year. I hope that anyone interested in an exchange will contact HEW.

Scientists Find Monkeys Have Brains that Function Asymmetrically

A Stanford University scientist recently reported that monkeys possess a type of brain which had earlier been associated primarily with man's specific intellectual capacities. The discovery by Henry H. Dewson helps to bridge a gap in our knowledge of the stages of evolution in the human brain.

In the human, there is a lack of symmetry of brain organization, with each half of the brain specialized to handle different activities. The left half deals particularly with those activities which contribute to the understanding and use of spoken language. Dewson said that, like humans, monkeys have been found to have similar asymmetries of brain function.

Seeking to determine why man's brain functions asymmetrically, Dewson and his associates turned to other animals. Under NSF grants, the researchers trained more than a dozen macaque monkeys to recognize various sounds and to match these sounds with certain colors. The task demands not only listening and looking but a form of recall memory as well. Dewson believes that the trained monkeys can be used as an animal model for studies of such maladies as strokes, which lead in humans to asphasia or loss of the capacity for understanding or expressing thoughts conveyed by language.