

Letters

Vietnam

It is truly a shame when two scientists whose work I have respected highly for many years step outside their fields of competence to advise other scientists not to help their country in time of a national emergency (Luria and Szent-Györgyi, Letters, 6 Oct.). Whether or not we agree that the war should be fought, or how it is fought, the incontrovertible fact remains that our country is fighting a war. . . . To say that they "believe that the Vietnam war is both a national catastrophe and a moral blight for our country" skirts the issue that Americans are being killed in Vietnam. Not helping our country will not shorten the war. It will merely increase the number of American casualties. . . . Many of the people who are protesting most loudly worked very hard to help elect this administration. These people should search their own consciences before advising others not to help their government in augmenting the policies that they voted for them to make. Pollard (Letters, 18 Aug. and 27 Oct.) should be congratulated for his efforts to help organize scientists to use their abilities to help their country in this time of need, even though he does not approve of the war.

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Luria and Szent-Györgyi stated that "Several thousand university professors, including a large percentage of scientists, have expressed their opposition to the Vietnam war in public statements, newspaper ads, and open letters to the President." On such a highly controversial issue, dissenters are more likely to express their views than supporters. As a scientist, I wonder whether even larger numbers of scientists are in general accord with the Vietnam

policies of the Administration. I should like to cite an analogy. At the 1967 annual meeting of the American Society for Microbiology (of which Luria is now president), a resolution was introduced to dissolve the standing committee advisory to the U.S. Army Biological Laboratories. After considerable discussion, the resolution was rejected on a standing vote by a majority I estimated to be at least 8 to 1.

Luria and Szent-Györgyi further state that "It may . . . be wise for many of us who oppose the war to review our present professional activities in order to make sure that they do not unnecessarily contribute to the waging and prolongation of that war." I would call upon the many scientists who support the war effort to make sure their professional activities do just that. Communists are, and always have been, openly dedicated to the destruction of systems of democracy such as that practiced in the United States. Fighting communism in Vietnam is a dirty, complicated, exasperating task. But unless we win, we shall surely have to fight again closer to home.

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I congratulate Luria and Szent-Györgyi on their forthright statement. As to Lukes who urges "intellectuals" to become reconciled with Johnson lest they be excluded from the councils of power—*sancta simplicitas*!

There is an old saying: "He that sups with the devil must have a long spoon." When the devil is an institutional monster that threatens to destroy our honor even before it claims our lives, there is no spoon long enough to tempt a free man to such a feast.

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In his review of two books on aging (4 Aug., p. 534), Bernard Strehler quite correctly points out the dimensions of the problem confronting scientists involved in studies of biological aging. He departs from the books, however, to castigate NIH, arguing that it has been an "obstacle to progress" and has shown a "discouraging lack of interest in the initiation of a vigorous effort to understand the fundamental phenomenon." He shows consternation over the assignment of gerontology to the National Institute of Child Health and Human Development, "where it is subsidiary to obstetrics, gynecology, and pediatrics." Furthermore, he complains of "unsympathetic study-section committees with competitive interests." To correct these deficiencies, he outlines a four-point program including the creation of a National Institute for Aging Research and the establishment of a study section on aging.

As a member of the Program-Project Committee of NICHD from 1964 to 1967, I served on most of the site visits to research centers concerned with the study of aging. The committee was composed of a wide variety of biological specialists, all of whom were eager to support scientifically meritorious research. Many, many hours of study, review, and consultation were devoted to requests for support in research on aging. Excellence in research deserves support, but I am sure Strehler will agree that where the commitment to excellence is obscure, the personnel untrained, and the institutional environment unpromising, support should be withheld. Having worked closely with NIH staff, I flatly reject as erroneous Strehler's statement that NIH has been an obstacle to progress in this field. I wish also to say emphatically that aging research is not a subsidiary to other specialties within the NICHD. Strehler's complaint regarding unsympathetic study-section committees is without foundation. . . .

A separate institute for research on aging is an expensive way to call attention to a broad-based, highly complex, and conceptually vague area of investigation. The NICHD has a definite mandate that includes support of research on aging. It is aware of the need to have trained scientists move into that field. The members of the Program-Project Committee wholeheartedly support Strehler's plea for more and better basic research on aging.



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Any scientist desiring to work on biological aging will be warmly received by the NIH staff. But warm reception and shared philosophies do not necessarily imply flow of dollars; good research proposals are also a requirement.

Strehler's hope that "in 1977 a book review such as this would be an undiluted discussion of solid achievements" must rest largely on the attraction of bright, imaginative scientists into the field of aging. This will be accomplished by the demonstration of research competence in the laboratories where aging research is now in progress.

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... How can the present feeble research effort be improved? I would suggest ... creation of a Research Commission on Aging which would be directly responsible to the President and Congress and the transfer to this commission of authority for all basic biological research on aging—in effect, formation of an AEC of biological aging.

There are very good reasons for taking so strong a stand. For one, Verzar's experimental work relating the amount of cross-linkage (chemical bonding between molecules not normally joined) in collagen to the age of the collagen is of the same order of importance to aging research as the discovery of nuclear fission was to nuclear research. (The developmental stages are quite comparable.) Another reason is that the impact upon the world will be even greater from the significant extension of the human lifespan than it has been from the application of nuclear power. ...

Perhaps the greatest need is for the testing of the various hypotheses on the origin of aging. For example, at present there is a considerable question as to which is the more important in producing biological aging—the accumulation of nongenetic cross-linked material, or the accumulation of mutations. Further, there is the question of just how important cross-linkage is in producing mutations. Obviously these questions are not going to be answered by theoreticians alone; solid experimental data are essential. ...

Why haven't steps been taken before now? There are a number of barriers, including psychological ones. The

lingering influence of ancient moral and religious ideas predisposes people toward accepting the inevitability of aging. The story of Adam and Eve explains that mankind lost eternal youth through original sin, and stories of arrangements with the devil (Dr. Faustus) point the moral that the search for eternal youth is evil. ... A military barrier may develop because of the possibility that men would be less willing to risk their lives in battle if the lifespan were longer and old age more attractive. ... A political barrier might develop if certain heavily populated countries considered any effort at lowering the death rate to be a biological weapon intended for use against them. ...

Yet considerable prestige would accrue to the country that first bestows extended youth upon the rest of the world, and an increased lifespan would permit an increased rate of scientific and economic progress. ...

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Unfortunately, Wagner's letter does not deal substantively with the historical issues discussed in my review. Of course, he has every right to interpret the past in the light of his own beliefs, but one might have hoped for something more than blanket denials of facts presented by the organization in question—facts that are generally substantiated by my own observations during the past 11 years as section chief in the Gerontology Branch, NICHHD, NIH.

Carpenter's observations are interesting and constructive; and although I, too, believe that a more intensive and systematic approach than that presently in effect is needed, if we are to understand this problem in the next quinquennium, I neither believe that anything as massive as a Manhattan Project is needed or desirable, nor that we should emphasize too heavily problematical political or military consequences of a breakthrough in this field. Rather, what is needed is primarily imaginative, dedicated, and constructive leadership within appropriate governmental or private organizations, and a corresponding resource commitment—a commitment smaller than that required for one Moon Shot.

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