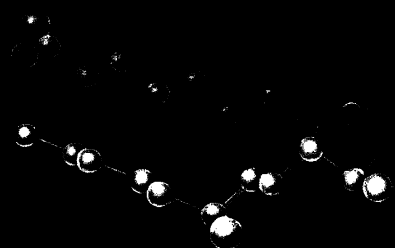


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LETTERS

TMI Public Health Fund

Eliot Marshall (News and Comment, 14 Oct., p. 142) reports criticism of the management of the Three Mile Island Public Health Fund.

The fund is under the supervision of the U.S. district court in Harrisburg, Pennsylvania, not the Berger law firm. The law firm makes recommendations to the court. Marshall reports a suggestion of possible impropriety in the management of the fund. Any impropriety would require the complicity of the court, a circumstance that seems highly unlikely. It would also require that the lawyers of the opposition, in this instance the insurance companies and general public utilities, stand silent. That, too, seems improbable.

The supervision provided by the court is meticulous. It requires equally meticulous preparation; it also requires public notice and time for response. Errors of substance, uncertainties, misjudgments, and errors of procedure all have the potential for further litigation and delay. The process is slow by nature. It is, nonetheless, wholesome, public, and well scrutinized.

The fund's missions have been defined in detail by the settlement agreement, as outlined by Marshall. The topics are complex and contentious. To ensure that the full range of possibilities is considered, David Berger has assembled an advisory committee on which I serve. The committee provides one level of scholarly review, asserted by Marshall to be absent. The committee has, with the explicit authorization of the court, commissioned various reviews, now available; has held various meetings, including special interviews with citizens of Harrisburg and vicinity; and has advertised for specific proposals to fill further gaps in knowledge. One of the meetings was a 3-day "Forum on Nuclear Power" held in Middletown on 28, 29, and 30 March 1983. All of the lawyers, members of the advisory committee, and various additional scholars from around the world made themselves available to the public during those meetings. Abundant time was reserved for comments from the public; all questions posed were addressed. The nature of the fund and the program being developed was explained in detail by Berger himself. Is this series of procedures consistent with the suggestion that the normal processes of discussion and review are not being followed?

The TMI Public Health Fund is small in proportion to potential demands. The

fund is important because it offers an unusual opportunity to develop from the TMI accident specific data and insight necessary to future management of nuclear power. The program being developed will serve not only the citizens near TMI, but all. Marshall's article misses that point in its emphasis on criticism from those who are unfamiliar with the fund or in disagreement with the objectives established in the settlement agreement.

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I read with interest the recent account by Marshall concerning "Carving up TMI's class action fund" and commend him for his clear and concise statement of the problem. There are many questions that need to be addressed; in fact, there are many more questions than answers at present. I find it distressing that the "advocate" of the class action has such limited communication with the "class" being represented. This was one of the primary reasons why I became involved with the health issues committee that was organized by members of other local groups who were addressing problems resulting from the TMI accident and nuclear energy in general, and who were trying to interact on a professional basis with the Berger law firm. I thought that, as a scientific professional, I might obtain more direct answers concerning the scientific issues in question. I was wrong. The Berger firm has shown no more interest in communicating with me than with other members of the local populace.

I asked the Berger firm about their plans to use funds allocated to the "public health fund" and got nowhere. The office of grants and contracts at our local university also put in a request for information concerning the funding of scientific projects and received a polite letter stating that the inquiry would be filed and "kept in mind." No other information was forthcoming.

The research in which I am involved is not related in any way to radiation safety, so I would not personally benefit from an award from this fund. I therefore resent being categorized as a "disgruntled proposer" by the Berger firm. I acted in two capacities in my recent endeavor: (i) as a scientist interested in helping the local community deal with a difficult problem and (ii) as a scientist interested in promoting scientific research at an institution capable of providing much expertise to help solve a highly technical and difficult problem.

I plan to continue my interaction with

the local community so that they know that some scientists want to and can communicate with them on technical issues in a manner that they can understand. I hope that other scientists will do the same.

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Marshall's article on the TMI Public Health Fund includes some contradictory statements concerning the current status of my membership on the fund's advisory board. I have looked at my files and find that I submitted my formal resignation in a letter dated 6 April 1983. The reason for my resignation was simply lack of time.

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Instruction in Science and Mathematics

Recent studies by several qualified commissions have called attention to the general failure of our educational institutions to meet the high teaching standards to which all students are entitled and which must be maintained if we are to survive as a modern nation with economic stability and an adequate national defense.

The most serious deficiencies of our educational institutions, as emphasized by the National Commission on Excellence in Education and the National Science Board's Commission on Precollege Education in Mathematics, Science and Technology, lie in their inadequate teaching of mathematics and science, from early elementary grades through community (or junior) college.

Most proposals to remedy the situation would, if implemented, assist in improving the quality of science and mathematics education, but at best would be long-range in their impact. In general, they do not focus on the primary cause of the problem: most individuals who are qualified to teach science or mathematics can make considerably more money, associate with intellectual and professional peers, and avoid the hassles of teaching by working any place other than the classroom. Certainly society is indebted to those who are still teaching science and mathematics.

One suggestion that has received too little attention is included in a legislative package sponsored this year by Senators John Glenn (D-Ohio) and Ernest Hollings (D-S.C.) and by Representative Dave McCurdy (D-Okla.) and 63 other members of the House of Representatives. The Glenn-McCurdy bills that could have the greatest impact are S. 290 and H.R. 836. They would provide tax credits to certain employers for releasing their employees who are qualified scientists, engineers, or mathematicians (and who are qualified as teachers) to teach, without pay, a limited number of hours each week in local schools.

Glenn and McCurdy recognize one critical weakness in our existing educational system: that it cannot be expected—with its present severe shortage of qualified science and mathematics teachers—to pull itself up by its own bootstraps. They also recognize that this country cannot wait for a generation or more for quality education; that we cannot wait that long to catch up with the rest of the industrialized world, and even with some of the developing nations.

The proposal in the Glenn-McCurdy bills would, if implemented, provide truly effective improvement in science and mathematics education all across the country *almost at once*. Moreover, its cost would be much lower than some of the other suggestions that have been offered, and it would require almost no additional administrative personnel, either at the federal or the local level.

There are, as with any challenging idea, a number of debatable aspects associated with this proposal, as well as two obstacles. One obstacle is possible concern among some members of teachers' organizations that their professional status would be threatened. I believe this can be avoided by creating a special category such as "guest instructor"—totally outside the regular faculty—for teachers loaned by industry. A second and major obstacle is the normal apprehension in Congress and in the Administration about bringing up any tax bill for consideration during a presidential election year.

But it is obvious that the situation with respect to mathematics and science education in this country is already calamitous and cannot be ignored. Our reaction to it must be to insist on immediate and meaningful corrective action.

No one program—including the Glenn-McCurdy proposal—will, by itself, restore the quality of the education our children receive. Many steps must be undertaken as soon as possible, and science and mathematics are not the only

subjects in need of assistance. However, there has been, I think, no other suggested plan that would break the existing condition in which unqualified teachers are passing on to uninspired students unacceptable attitudes toward an understanding of science and mathematics.

The time has come for all concerned citizens to speak out vigorously on this subject. This is especially true of certain groups—such as scientists, mathematicians, engineers—and all who are concerned with quality education for our country's youth. I recommend that all such persons write or phone their congressmen and senators, calling for support of the Glenn-McCurdy tax credit legislation (S. 290 and H.R. 836) for the teaching of science and mathematics by volunteers from industry. As a former member of Congress, I can assure the readers of *Science* that their letters and calls could easily make the difference and help bring about the enactment of this legislation.

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Software Piracy

The "weak bit" scheme to foil software pirates (Research News, 23 Sept., p. 1279) is a perfect example of a technical solution to what is really a social problem.

It is pretty clear that in many respects software and book publishing are similar: authors spend a lot of time doing research and then write up a package that is mass-produced and sold to individual consumers.

The only real difference is price. Whereas a book may retail for \$10 to \$30, popular software such as word processors and spreadsheets often go for \$300 to \$500. Any consumer who has done a little programming knows that such prices are unrealistic. (If such prices reflect true costs, how can one explain the recent trend to "bundled" computers that include \$1000 to \$2000 worth of software in their price?) It is this inordinate profit margin that causes the software pirate to flourish. Reduce the price of software to a realistic level, and he will cease to exist.

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