

Letters

Proposed Pay Raises for Scientists in Government

None of the recent discussion of the proposed pay increases for top-level scientists in the federal service mentions either of two fundamental problems—whether it is *possible* to make the salaries for these positions competitive with salaries in private industry, and whether it is *desirable* to make the attempt.

The assumption that the upper scientific positions in government service can be made competitive merely by raising salary scales 30 or 60 percent ignores several rather important facts. First, for private corporations, a scientist's salary is a business expense and deductible from taxable income. If a private firm hires a man away from the government by paying him a few thousand dollars more, the government pays a healthy proportion of this by way of lost corporation income tax. For the larger industrial firms, where the proportion of higher-paid scientists to total staff is rather small, the extra costs of keeping ahead of any salaries the government may offer will be relatively insignificant. Incidentally, for those corporations which have research contracts containing some elements of a "cost plus" feature, increased salaries for top people—demanded, as the corporation will put it, by the government's salary increases—may be positively advantageous. And it seems unlikely that the "research corporations" whose business consists solely or largely of government contracts—corporations which to some extent were organized to avoid government restrictions (with the more or less tacit agreement of government agency heads)—will suddenly become gentlemen and stop their raiding of federal bureaus, boards, and departments. Why should they?

The Administration proposals, far from solving any of the problems of filling top science positions, will only

worsen those problems. Moreover, beyond a certain point—a point somewhere below \$20,000 per year, certainly—larger salaries are sought merely as evidence of, and means to, social status, prestige, or political power. The maneuvering, bickering, back-biting, character assassination, and manipulation of programs for personal ends that makes up so much of the inner life of larger corporations would, through the Administration's proposals, be extended to new and relatively untouched areas. The effects on science would hardly be good.

The second question is equally important. No one has argued that people cannot do their work properly on a salary of \$18,000. The proposal that such salaries be raised is made solely for the purpose of solving some limited personnel problems. But in June 1960 there were approximately 475,000 federal employees (GS-1 to GS-5) earning less than the minimum that conservative social agencies consider necessary for health and decent living. Now, as your news writer says [*Science* 136, 861 (1962)], the Administration seeks, *as a matter of policy*, to widen the gap between bottom and top. Will there be many volunteers for the task of defending this proposal against the very possible charge that it is indecent, undemocratic, and un-American?

The problem of keeping good people in top government positions is a real one, but have alternative possible approaches been thoroughly explored? It may be that the Administration has not exercised anything like all of its real powers. With regard to the "research corporations," for example, might not an Administration order that contracts be awarded only when the salaries involved had a stipulated relation to the federal pay structure have considerable effect? It may well be, too, that we need to face now a problem that is historically inevitable, that of limiting the higher sal-

aries paid by business corporations. There is no natural law that says a company vice president or counsel has to get more than a government immunologist or research coordinator. It is not necessarily good for society that a race-track manager is paid more than an editor of translated scientific papers. This problem, of course, involves far more than top science positions; it involves librarians, public health workers, nurses, psychiatric hospital workers, social workers, and teachers, among others. More immediately, one would like to see some discussion of such relatively simple proposals as the suggestion that the position of government workers be improved by exempting their salaries from income taxes. There are undoubtedly other possibilities, but, for the moment, it appears that the Congressmen who are reluctant to pay anybody more than they themselves get may be right.

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Ancient Greeks in Ireland?

The excellent article on Iran in a recent issue of *Science* [136, 109 (1962)] has prompted me to request assistance from your staff or any member of the Association.

I have somewhere mislaid a group of references which indicated that ancient Greeks at one time settled in Ireland and thus constituted one of the ancestral groups of the island.

Can you help me locate the original references? Many thanks.

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Research Is a Gamble

On reading "Medical research funds: NIH path through Congress has developed troublesome bumps" [*Science* 137, 115 (1962)], it becomes evident that Congress would like to subject medical research budgets to a "long, hard look."

In support of Shannon's statement that it is difficult to recruit personnel who can exercise meaningful supervision, I suggest that this is not a problem peculiar to government, and that in-

dustrial management cannot always recruit—even with the weapons of more generous salary and bonus arrangements—the supervision over research that is meaningful. This is implied by the famous, humbling statement that many of us involved in research administration keep framed at our desks—a statement by the late C. E. K. Mees, long-time director of research of Eastman Kodak Company.

Research is a gamble. It cannot be conducted according to the rules of efficiency engineering. Research must be lavish of ideas, money and time.

The best advice is, don't quit easily, don't trust anyone's judgment but your own, especially don't take any advice from any commercial person or financial expert and finally, if you really don't know what to do, match for it. The best person to decide what research work shall be done is the man who is doing research. The next best is the head of the department. After that you leave the field of best persons and meet increasingly worse groups.

The first of these is the research director, who is probably wrong more than half the time. Then comes a committee, which is wrong most of the time. Finally, there is the committee of company vice presidents, which is wrong all the time.

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Sex Conversion in the Copepod

Vacquier [*Science* **135**, 724 (1962)] reports that application of high hydrostatic pressures to larval stages of the copepod *Tigriopus* resulted in a shift in the sex ratio toward females, and says "At this stage of the work it is impossible to distinguish between selective effects . . . and sex conversion." In this he is mistaken, his data being quite adequate to demonstrate conversion.

At pressure of 1 atmosphere there were 142 surviving males out of a sample of 175 individuals of both sexes. Thus, no more than 33, or 19 percent, could have been females. This is clearly discordant with a finding of 96 surviving females out of a sample of 225 exposed to pressure of 600 atmospheres, the random sampling probability being less than 0.001. It is also discordant with a finding of 75 surviving females out of a sample of 253 exposed to pressure of 550 atmospheres, the random sampling probability being less than 0.02. In view of the fact that these comparisons involve not the ac-

tual number but the maximum number of females the 1-atmosphere sample could have had, there is no reason to doubt "conversion." Whether the conversion is morphological or functional is another matter. Also, it can be doubted whether sampling was random with respect to sex in making up the lots for the experiment. If sampling was not random, any conclusion regarding the sex ratio would be affected equally.

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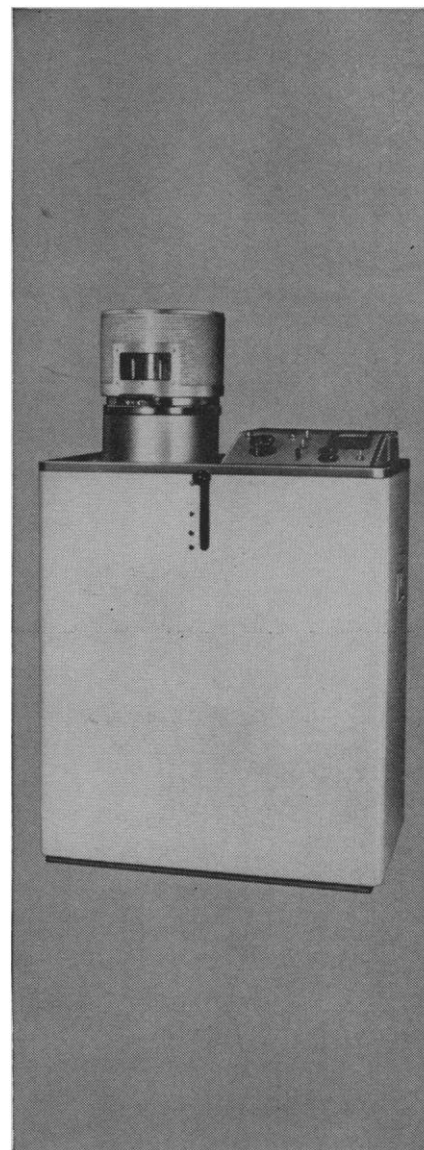
Government Regulations

The editorial on needless obstacles to government service [*Science* **137**, 89 (1962)] requires clarification of the statement that government employees must not receive compensation from any outside source. The point intended must have been that government employees must not accept outside compensation for activities performed as part of their government service, or some such qualification.

The main point of the editorial—that the government sometimes hampers its recruitment programs, and that certain types of restriction on employment subsequent to government service are undesirable—is strengthened considerably through full examination of the conflict-of-interest practices and regulations.

One part of the regulation forbids any government employee from aiding in the filing of a claim against the government if he stands to gain by the claim or if the claimant is his child or wife. If taken literally, this forbids a government employee from helping his wife fill out her income tax refund claim. Although the regulations are supposed to be interpreted strictly, it seems hard to imagine that this restriction is intended. But the damage done by unforeseen and unprovided-for restrictions may be more serious than the evils which the regulations are meant to correct. Even worse is the lessening of regard for good regulations which is caused by the tendency to ignore masses of poorly planned instructions which cannot be either understood or applied and which say much more than they mean, and therefore usually mean little to the persons concerned.

[Name withheld by request]



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