

# How To Remain in the Laboratory Though Head of a Department

There are many tricks which help a department head to do his job and still have time for his laboratory.

E. C. Pollard

From time to time remarks are made in editorials to the effect that we are not using senior scientific personnel wisely and are adding unduly to the burdens of scientific administration, and the writers usually express concern, if not alarm.

It seems to me that the readers of *Science* might be interested in the product of a few years' experience during which I have been able to conduct a moderate amount of scientific administration and at the same time appear in person in the laboratory (often to the annoyance of the members thereof) and to remain quite alive as a research person.

I believe that the modern scientific research program demands this. I do not believe that the head of a department is doing his best if he is not also actively concerned with research; and this means doing research in his own laboratory as well as making wise remarks at scientific gatherings and attending seminars.

I would like to share some pieces of wisdom which seem to have come to me over the years. Some of these are small. Some are actually concerned with major scientific policies of the nation. All, I believe, are concerned with the problem of keeping one's lab coat on and, at the same time, running a department.

## Budgets

The primary cause of panic in the hearts of most scientific administrators is, undeniably, linked with the budget. Obviously the problem of getting mon-

ey is inescapable, and this involves genuine hard work. However, it is not really possible to put in long hours devising ways of getting funds. The long hours are spent on the mechanics of doing it. I have found that the mechanics of getting budgets in shape have been enormously simplified by a little device which has taken the form of mild administrative manipulation. I have gone to the office next above me, where I know the budget will be looked at and possibly obstructed, and have offered to buy help in that office with money from my own department. This offer usually falls on very susceptible ears. Usually these offices are themselves badly in need of more help, and my suggestion nearly always works to the extent of getting somebody into the office without my paying anything, and at the same time generating a sort of gratitude toward me which gives me a claim to some time and attention from the office. Then I am able to go over all budgetary matters (beyond the first formative stage) with the individual in the superior office. In this way we can sit down for an hour and come up with a budget which is final, which I know will not come back to me because of a technicality on social security for a woman who has worked more than 40 hours a week, or some similar and almost complete block to my spending time in the lab. This device is one of the best methods of saving hours of work. I estimate that I gain nearly 10 hours a week this way. I should also add that you need to have one faculty member who knows as much about the budget as you do; this is helpful both for checking your addition and for relieving panic.

## Literature Searches and Reports

I have found that employing a girl with a degree in science, but with no special desire to work in the lab, and training her to find relevant literature and give me a list of articles on various subjects has been most valuable. Our girl does this for every member of the department and has greatly aided in the teaching of the advanced courses, in which literature surveys are often important. In addition to this she also does the first stage of correction of proof, collects the material for progress reports, and checks over grant applications in areas in which knowledge of the literature and the work of others is important. She is quite an addition to the department, for we no longer feel a sense of inadequacy with regard to the literature. I estimate that she is worth an additional 5 or 6 hours per week to me and she gives me a feeling that the quality of our operation is improved.

## Block Post-docs; Revive Instructors

Since the end of World War II, when there was a genuine shortage of young scientists, an unfortunate tendency to abolish the rank of instructor on scientific faculties has developed. However I suggest that we restore the instructorship, even if we must do so by giving a title such as "Educational Research Associate" to junior members of the faculty.

Every time you hire a post-doctoral fellow, you introduce into the laboratory a privileged individual who undermines your own time in the lab. He does no teaching, he mingles with the graduate students, to whom he rapidly becomes an object of great admiration, and he may easily deflect your program quite seriously. On several occasions when faculty members have come to me with troubles with their graduate students we have found that these difficulties stem from the glamor of post-docs working on different projects in the same lab. The old fashioned instructor was far better than this type of post-doc. He could take a turn at registration, add up marks, take charge of recitation sections, and, at a pinch, take your big lecture when you have to be away, or even when you feel you have to do an experiment—which is a legitimate reason for asking for help with teaching. None of these

The author is professor (and head of the department) of biophysics at Pennsylvania State University, University Park.

things can be done with a post-doc. Instead, the post-doc is a curious person who apparently is not dependent on the head of the department, but who in fact is very much so. The day will come when he appears in your office wondering about a job. You may think that he will be able to find a job for himself, but you will be mistaken. You will have many letters to write and much spadework to do, all of which takes a lot of time. If he has already taught and can be assessed as a teacher, he is far better as an individual on the market. He can make the right responses when he is interviewed by a department head, and he is clearly more desirable to the head. Also, he understands the problems of the department and, instead of making your life harder, he makes it easier. So cut down on the post-docs and replace them with instructors.

### **The Myth of Endowments**

This conflict between postdoctoral students and very young faculty members is a matter of basic misunderstanding of what is possible in a university. One reason why there are so many postdoctoral students is because granting agencies are reluctant to pay faculty salaries. The argument goes that a person on the faculty should be paid with "hard" money, money the university puts up regardless of outside grants.

Hard money exists only for teaching or an equivalent chore. The myth that the endowments of a university help in this respect can be dispelled very quickly. If it were true that the well-endowed universities had money to be used for teaching, then they would be asking smaller fees from students than the poorly endowed universities ask. In fact they ask larger fees. Also, if endowments really were used to reduce operating costs, such universities would ask smaller overheads from granting agencies; a check will show that this is not the case. We must realize that endowments are actually made in order to establish some memorial to the donors: they very rarely do anything of service to the scientific faculty. They may be a great help in the humanities, but they are little or no help to scientific teaching.

Therefore, it is important to convince the granting agencies that use

of grant funds for faculty salaries is desirable. In this way faculty members could be relieved of excessive teaching burdens, and the work could be spread around much more effectively.

### **Relations with the Administration**

That relations with the administration be good is essential. Disagreement on policy of any basic kind can completely prevent work in the laboratory. Such disagreement eats away at the department head's sense of security and thus completely destroys his desire to work in the lab. If relationships with the administration deteriorate, then the possibility of either resigning or leaving becomes attractive. The department head should make this quite apparent and should face it clearly, without any fear. The problem of moving is one which is faced by administrators all over the country. Administrators for industrial concerns expect to move every 3 or 4 years and yet seem to live reasonably well-adjusted lives. The head of a university department is far too concerned with the prospect of leaving. He does not notice how much younger his colleagues look after they have escaped and does not properly assess the value that freedom may give him.

The truth is that the administrator is valued much more by the administration if he is ready to resign at a moment's notice. The administration feels it is trapped after appointing a head of a department. After the appointment, it may not like him, but it can do nothing about it without considerable turmoil. If the department head comes around and offers voluntarily to remove himself, he suddenly becomes so desirable that almost any of his requests are immediately granted. However, the action must be no bluff; it must be accompanied by a sincere intention to get out. If it is well known that this is your philosophy, you will get a good many hours with a lab coat on and a good deal more work done.

### **No Sabbaticals**

It is a temptation for the harassed administrator to think he can gain something by a sabbatical. This is a great error. There is one great ad-

vantage to a sabbatical in that it disengages you from a whole series of committees and permits you to start over again. However the process of disengagement from committees can be achieved in other ways: for example, you can simply not turn up at meeting times until finally you are removed from the committee. A more honorable way is to state resolutely that you cannot serve on the committee because you have to work in your lab. Believe it or not, this actually works. The person who leaves to go on a sabbatical finds it very difficult to start any work in the laboratory, because things are unfamiliar; he doesn't know where to look for a bottle of agar or a supply of 6-SN-7 vacuum tubes, and he beats a retreat to the library where he soon finds he can get all his reading done in a few days. He will have written all the papers he can write in less than 2 months; then time will hang on his hands, and what he will really be doing is taking a vacation. This may be very beneficial, but it doesn't get him into the laboratory.

The department head almost never wants a sabbatical; it is his wife who wants it. And the solution to this problem is to realize that the wife does not really want a whole year abroad, battling another language, looking after the health of children in the face of new school situations, and so on; what she really wants is a change. It is very easy to take 10 weeks away in the winter at some attractive place in South America, with good pay, not too much work, and a great deal of variety, without anything like the hazard involved in the sabbatical.

If you take a sabbatical, you lose the direction of your students and your laboratory assistant, and you get out of the habit of overcoming the little obstructions to getting into the laboratory and instead relax into too soft an existence. I do not notice that the output of heads of departments rises sharply after a sabbatical. Rather, the reverse seems to be true.

None of these remarks apply to the professor who is not head of a department. For him a year away may be a wonderful idea.

### **The Laboratory Assistant**

You must have a laboratory assistant, preferably female. The pur-

pose of this assistant is to require daily instruction about what to do. Thus you are inescapably forced to plan for the operation of another pair of hands. A female is better because she will not operate quite so readily on her own, and this is exactly what you want. Any head of a department who lets his laboratory assistant go has, by that action, resigned himself from future laboratory work.

### **Expect No Rewards**

One of the important psychological reasons why an administrator must get into the laboratory is that there are really no rewards for him in administration. In truth the scientific administrator plays a key role in our modern scientific society; nearly all the departments that are commonly recognized as successful clearly depend upon an individual who makes them come to life and makes them great. Nevertheless, the individual in this position will not have much sense of being rewarded. There is a strange, but very human attitude, which can be expressed by saying that if a man is the head of a department, then nothing else need be given him. In some respects this is right, but it does not fill the emotional needs of the man. If he is giving up his beloved laboratory in order to be an administrator, then the combination of hard work with no reward and the loss of a pleasant way of living will be too much for him.

In making these remarks about the lack of reward for administrators, I should like also to suggest that we should find some way of rewarding individuals who have done a good job of teaching graduate students and helping them to become competent scientists. Our scientific society recognizes individual excellence, the single brilliant piece of work, but gives very little to the person who has patiently stayed with human being after human being and turned them into independent first-rate scientists. The personal satisfaction that results from this is great, but the research director's position in the scientific society, which often means his ability to get his own way, would be strengthened if there were some method of recognizing his success. Maybe the AAAS should think about it. However, to return to what I was saying, the head of a depart-

ment should realize that there is going to be no reward in administration and should therefore not neglect his laboratory too much.

### **The Secretary**

One often hears that with a good secretary the whole administrative job is far easier. I suspect it would be more correct to say "pleasanter." However, if one works in the lab, one cannot be in the office. It is important to have a secretary who measures her success by how long you are out of the office and not by how long you are in it. Such secretaries are not common.

Most people are amused by my suggestion that instead of rotating administrators one should move their secretaries around. It is a better suggestion than it appears. A competent, fully professional secretary who is not possessive about her work is a very great help. By moving secretaries around, professionalism is increased and personal involvement is decreased. At all events, there can be a serious conflict between the office and the lab, and the secretary can be a real hindrance. Watch with some care the operation of your secretary.

### **Dealings with the Faculty**

In trying to accomplish as much as possible in the shortest time, it is necessary to interrupt faculty members now and then with special requests. This is an intrusion on their time, and they may resent it. Nevertheless, if such interruptions are explained, the faculty members will not become tense about having the head of the department appear, consult with him about some matter, and disappear. Here it is important to know the difference between small things and big things. There is a great deal of difference between asking a faculty member whether he is willing to take his turn at registration, and asking him whether he has decided to include calculus in Biology 12. The head of a department must exercise great skill in doing the fast job fast and allowing plenty of time for the jobs that have to be thought about. This is part of the art, and no rules can be spelled out, but attention to it is worthwhile.

Faculties definitely want to meet.

Meeting about once every 2 weeks seems to make everybody feel that the amenities have been observed, and it is essential to have both agenda and minutes for these meetings. Every time one has a long rambling faculty meeting a lot of time which could be spent in the laboratory is wasted. A short compact meeting, with some easily expedited matters interspersed with those that need a little thought, is quite satisfying both as an intellectual exercise and also as a friendly action on the part of the faculty. If it looks as though there is a tedious job to be done, the device of the subcommittee and second meeting should be turned to as soon as possible.

### **Administration Must Not Suffer**

It is one of the rules of this game that laboratory time must not be obtained at the expense of good administration. Therefore one must plan the administrative processes so that time is allowed for important operations and means of checking on the execution of delegated responsibility are included. Doing this conscientiously and frequently usually makes it possible to get the work done better; it also makes it apparent if responsibilities have grown too great to permit laboratory work; that is the time to ask for help or for a new job, and the request must come before one has been pulled out of the laboratory. It is four times as hard to return to the laboratory as it is to stay in it.

### **Trips**

Nothing impedes laboratory work like trips. On your return you will find latent crises in your office and in your laboratory a feeling that they made out all right without you. So it is days before you are back in the lab. On the other hand, trips are necessary, because you have to be able to place graduate students and find new candidates for the faculty, as well as to retain some scientific friendships. So there is really no alternative—one has to do some traveling. Probably if heads of departments could form some kind of an informal association and agree on specific meeting times to exchange employment information, it would be possible to cut down on travel. Until such schemes are de-

veloped, travel is a necessary evil, but unmistakably an evil.

Finally, I give one more simple piece of advice. Leave the laboratory as though you are going to come back to it. Make plans for what apparatus you will need tomorrow or this afternoon or this evening, and write down in the laboratory book the next things you are going to do. One of the greatest obstacles to entering the lab

is the fact that laboratory work can seem to be diffuse and unsubstantial if a good deal of it is being done by others. It will never pull you. On the other hand office work can seem to be continually demanding. By making plans for the next moment of entering the lab so that you feel frustrated when you don't get there, the equivalent of a demand is created. This is very important.

## Postscript

It is interesting that I find, after writing this article, that I am in the lab even more. In other words, affirming both to yourself and to others that you are going to work in the laboratory has the effect of consolidating your position as a research man and strengthening your resolution.

Good Luck.

# News and Comment

## Tobacco: After Publicity Surge, Surgeon General's Report Seems To Have Little Enduring Effect

Following the release of *Smoking and Health*, the widely publicized report condemning tobacco as a health hazard, Surgeon General Luther L. Terry proclaimed an "era of action" to discourage smoking. But he warned that "To change a nation's smoking habits, we must think in terms of a program of 10 years plus."

On the basis of what has happened since his advisory committee issued the report last January, Terry appears to have been justified in keeping matters open-ended, for the nation's smokers have demonstrated that their affection for tobacco easily overcomes any fears cast up by scientific research, and the tobacco industry has demonstrated that it can seriously impede government efforts to spread those fears. Perhaps the most revealing index of the report's effect is to be found in figures on cigarette consumption. In the 6-month period immediately following the release of the report, cigarette sales declined 5.74 percent, as compared with the same period in the previous year, according to figures supplied by the industry. But toward the end of the period this year they started to go up again, and sales for June 1964 were 8.64 percent above sales for June 1963.

The rise in consumption can in very large part be attributed to nothing more than the fact that some 70 million Americans find tobacco delicious to use and painful to discard; but a fair amount of credit for the restoration of sales must necessarily go to the tobacco industry, which has handled its peculiar problem with extreme shrewdness.

The problem, in brief, was that the industry's product had been unanimously labeled detrimental to public health by a prestigious body of researchers in whose appointment the industry had a hand (*Science*, 17 January and 27 March, 1964). Thus, the report not only had a quality of impartiality to it but it bore the imprint of the U.S. Government (though, actually, it was only an advisory report, and need not necessarily have been adopted by the PHS) and its release was skillfully managed to attract a great deal of publicity.

As was anticipated, the immediate effect of the report was to depress cigarette sales, but previous experience, with similar reports by volunteer health organizations, had demonstrated that the yen for tobacco is only temporarily overwhelmed by reports of its effect on health. However, now the expectation was that since the PHS had explicitly indicted tobacco as detrimental to health, the Federal Trade Commission would feel that it had a suffi-

ciently strong scientific case to require that tobacco packages and advertising carry a warning of health hazards. With such a warning staring him in the face every time he reached for a cigarette, the smoker would not find it easy to forget the health hazards of lighting up. This was the long-term strategy to get the Public Health Service to issue a definitive statement on tobacco.

It was a strategy steeped in political reality, since, in coming out against tobacco, the PHS and the FTC were taking on an industry whose economics give it political power to look after its own interests. The industry, located almost entirely in southern states whose one-party dominance provides high congressional seniority, was quick to advertise that tobacco is the fifth largest cash crop in the country; that in 1962 it produced \$1.3 billion income for farmers in North Carolina, Kentucky, South Carolina, Virginia, Georgia, and Tennessee; and that tobacco manufacturers provided \$379 million in wages for 96,000 employees. Furthermore it was pointed out, about 750,000 farm families in 21 states derive income from tobacco, and tobacco sales in 1963 totaled \$8.08 billion, of which \$3.3 billion went to federal, state, and local governments in excise taxes. As one news release from the industry put it: "Tobacco products pass across sales counters more frequently than anything else—except money."

This boast might be open to dispute, but it gives some measure of the struggle undertaken by the PHS and the FTC, neither of which is notable for its political muscle.

Following the release of the report, the FTC announced that, starting 1 January, all cigarette packages would have to carry a warning that smoking may cause death from cancer and