

## Advice on applying for a postdoc

Philip W. Anderson



Soon it will be the time of year again when all physics departments are emitting and absorbing a shower of papers, with both channels containing postdoc applications and letters of recommendation, but for different sets of people. The annual trauma has been getting longer and more painful every year, primarily because of the capabilities of those pesky word processors but also because young people are being given misleading signals from physics departments and very bad advice by their elders. The economists have been telling us that the computer revolution has, if anything, decreased real productivity, and this is surely true in the physics job market. One day last November one of our local secretaries invented from whole cloth a religious proscription against speech during working hours to give her time to handle the mass of applications.

First, the misleading signals: Physics departments are required by fairly sensible laws to advertise places openly and to give "write-ins" some kind of fair shake. Hypothetically, these are minorities and women, but in the real world the most intensive recruiting focuses on just that population, so such candidates are seldom write-ins. On the other hand, departments are remiss in asking for so-and-so many letters of recommendation to be sent out of the blue: Such a request normally leads to a certification of existence and consciousness rather than an accurate evaluation. If you as a professor are so unwise as to write a sincere, warm letter for your best student and make 50 photocopies, you are savaging all your perfectly competent students who are applying to the same places—

though God knows, this is often done. Departments normally try to—and always should—do a considerable amount of screening before they even consider the letters, and any sensible department calls for a genuine informal appraisal before making a final judgment.

Most pernicious is the department that asks ahead for multiple letters—say three to five. These are usually absolutely worthless and confirm the student in his feeling that he is being treated totally impersonally. One letter from a thesis professor, or in rare cases some other significant person, is plenty, if not too much.

Next for the student's own department: Here, I think it essential for the professor and his colleagues to expend a little more effort in trying to explain the realities to their students and to give them guidance. The realities, I hope at least, are that you as professor have a pretty good idea of the right places for a student to go; of the minimum quality of job that he should accept, given his ability; and most important of all, of where he would be out of his depth even if the department were crazy enough to accept him. You're not doing him any favor by sending him to certain rejection, even if it takes him off your hands (a not uncommon motivation of which I on occasion have been guilty myself). I cannot believe that, given this advice, there are as many as 50 places to which the student should apply (as I often see happen, even here at Princeton, though I strongly disapprove of such nonsense). The number should be more like 5 to 10. For any place that is a serious bet, the professor should be willing to make the effort of sending a personalized letter or phone call rather than the xeroxed form letter. In fact, he should all along have been informally touting the really promising student to the best places; that way they may have some

idea of whom they want before any applications arrive. The large industrial laboratories have had a great advantage all along because they look ahead via a personal recruiter in every major department; I think all other important recruiters of postdocs should do the same, at least informally.

Now for the student: It is his responsibility to put himself in the place of the recruiters, and to exert a slight degree of self-restraint on behalf of his contemporaries. Too often I have seen a first-rate candidate who knew perfectly well that he was very likely to go to Bell Labs or the Institute of Theoretical Physics in Santa Barbara send out the usual blizzard of applications, apparently just to assuage his ego, collect offers and do in his less fortunate fellow students. Meantime lots of departments that should know better are passing up very good candidates in the hope that this year's most glamorous person will come.

The student and the recruiter both should be clear that almost no one wants a student who is willing to go to any of 50 places. The very best people I have encountered have often applied to only one place—the one that is the next logical step in their careers. Do not apply to any place where you do not know what they do, and make sure the place is consistent with your career plans. Preferably, apply to no place where you do not know one or more people with whom you want to work. In particular, it is extremely frustrating for recruiters, and adds immeasurably to the problems I'm discussing, if you apply to places to which you have little intention of going. It saves the recruiter a great deal of effort to know that you sincerely want to go to his place, and will come if asked. Obviously, if you do not know the work done in the department or apply with a totally unsuitable background, you are violating this rule. For instance, I find

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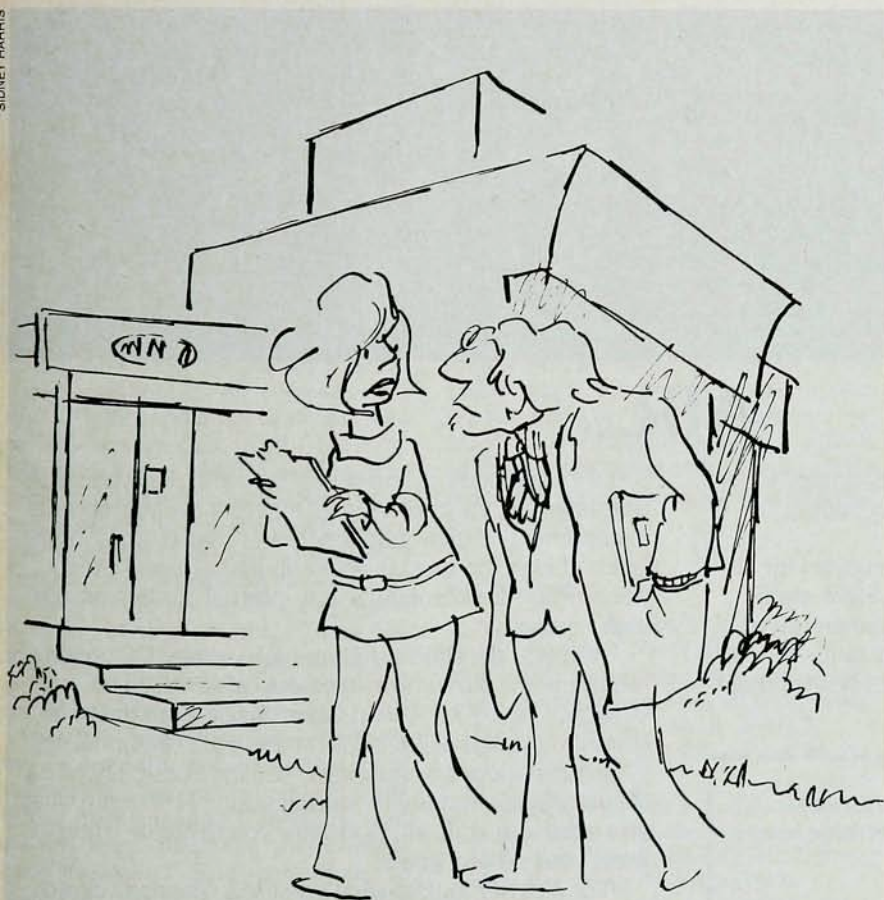
nothing more frustrating, being in a department that never does band theory and in a group that does no mathematical physics, to get applications in those fields. What kind of advice are these young people getting? Are they too shy to talk to their elders, most of whom must know what I, at least, do? If you cannot satisfy these criteria, see the next paragraph.

The student should be willing to think seriously about his future research career. Is he really committed against all odds? Does he feel confident that he personally will be one of the greats in his field? Or does he just not know what else to do or not visualize an interesting career in teaching, industry or government? He should realize that unless his professor or some associate is enthusiastic about him and his prospects, and wants desperately to get him into one of the top places, he hasn't got much chance. If you feel your professor underestimates you, go ahead anyway:

There are plenty of cases in which the standard route has been bypassed. But if that's your situation you're far better off focusing on a few places and trying to make direct personal contact.

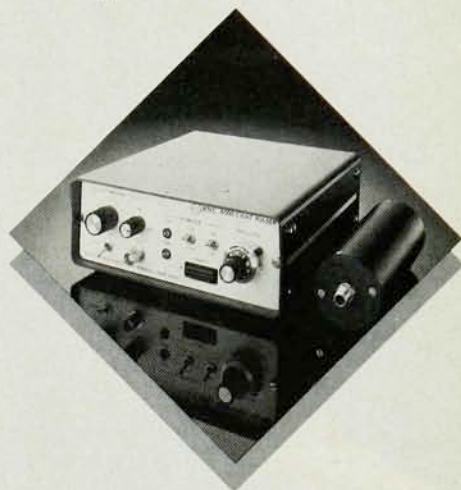
The student should be told the truth, that 90% of all jobs worth having are filled not by the applicant who writes in on his own hook, but by informal or formal search via the information network, which is not a venal "old boy" network but an absolutely vital way of making sure that the extraordinarily difficult job of doing meaningful research is staffed by people capable of living up to the challenge. The people in the network are, on the whole, remarkably able and dedicated, and they should have no patience for the student who wants a research job only because he doesn't know what else to do.

Much of the above applies to the equally painful problem of junior faculty jobs, but so many further difficulties apply there that the topic may deserve a separate column. □



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