# The Compleat Academic

A Career Guide
Second Edition

Edited by

John M. Darley, Mark P. Zanna, and Henry L. Roediger III

American Psychological Association  $\bullet$  Washington, DC 2004

# AFTER GRADUATE SCHOOL: A FACULTY POSITION OR A POSTDOCTORAL FELLOWSHIP?

KATHLEEN B. McDERMOTT AND TODD S. BRAVER

As you begin to consider options for your dissertation, it is probably time to start thinking seriously about the next step in your academic career. One big question with regard to this next step is whether you will pursue a postdoctoral fellowship (sometimes referred to as a postdoc) or go straight into a faculty position. This chapter considers some of the factors that may aid you in tackling this decision.

Twenty or so years ago, postdoctoral fellowships were fairly rare in psychology and often taken by those who could not secure tenure-track jobs directly following graduate school (although there were certainly exceptions to this generalization). The situation has now changed, and postdoctoral fellowships are now being increasingly pursued by even the most marketable of graduates.

There are several reasons why postdoctoral fellowships are becoming increasingly common in psychology. First, interdisciplinary work is gaining esteem. Postdoctoral fellowships offer the chance to obtain expertise in a discipline different from (but complementary to) the one in which the graduate work was done. The ideal postdoctoral fellowship will not constitute

The authors are grateful to the following people for providing helpful comments on earlier versions of this chapter: Deanna Barch, John Bulevich, Edith Chen, Jason Chan, Lisa Geraci, Cindy Lustig, Beth Marsh, Greg Miller, Roddy Roediger, Jason Watson, and Jeff Zacks.

graduate school but instead involve branching out into new territory. Second, in some subfields of psychology, skills are desired beyond those reasonably acquired during graduate training. A postdoctoral fellowship provides an opportunity to expose oneself to new disciplines and literatures and to add technical or methodological skills to one's repertoire. For example, a graduate student in a cognitive psychology program might decide to spend the first few postgraduate years learning neuroimaging techniques or other neuroscientific approaches to the study of cognition. With the increasing methodological sophistication of psychology as a whole, this pattern may begin to permeate other areas of psychology. Third, the changing nature of the social landscape has brought increasing acceptance of the need to achieve balance in one's career and personal life. Dual-career families are increasingly common, as are shared responsibilities for child rearing. Postdoctoral fellowships are sometimes pursued to accommodate these personal goals.

three more years or doing the same line of work that was

Certain reasons for pursuing a postdoctoral fellowship will be relevant for certain people and not others, and the decision of whether to pursue a postdoc will be made for different reasons. There is no universal checklist or flowchart to suggest whether a postdoc is right for you; rather, the decision will entail the weighing of a number of factors, some of which may be unique to your individual life situation. We want to suggest that accepting a tenure-track position immediately after graduate school is not always more desirable than a postdoc and that it is worth considering all your options before launching straight into your first faculty position.

In this chapter we lay out some of the pros and cons involved in both faculty positions and postdocs. We focus more on postdoctoral fellowships because faculty positions have traditionally been considered the default "next step" for people coming out of graduate school, and the advantages of these positions are widely known. We consider first some of the advantages of postdoctoral fellowships; we then consider some disadvantages to going this route. We also note that there are often constraints on making the decision; in other words, it is not always a case of determining what is the best professional decision but instead of determining what decision best satisfies the constraints of your personal life.

We then touch on the process of finding a postdoc and end with a brief discussion of the importance of making the most of your postdoctoral fellowship should you choose to go that route.

#### ATTRACTIONS OF A POSTDOCTORAL FELLOWSHIP

The attractions of a postdoctoral fellowship include an array of interwoven advantages, which converge on two general themes: A postdoc allows the expansion of your scientific background, skills, interests, and research experience, and it enhances the likelihood of obtaining and succeeding in your first faculty position.

## Enhanced Marketability

One of the most obvious advantages of a postdoctoral fellowship is that it offers the opportunity to expand and strengthen your vita so that when you enter the job market a few years later, you will be a much more attractive candidate. You will also have another person who is familiar with your work who can write a well-informed reference letter for you.

A postdoctoral fellowship gives you the opportunity to demonstrate your strengths. This may be especially important for people whose research projects take a bit longer than normal to come to fruition or for late bloomers who may need a few extra years to really shine. For those who excelled in graduate school and were able to complete a series of projects, the postdoctoral fellowship offers the chance to show the world that it is you—not just your graduate advisor—who is capable of impressive work. A person who has flourished in graduate school may or may not be ready for a faculty position, depending on the role the advisor played in ensuring success in graduate school. A person who has succeeded while working in multiple labs and in multiple research subfields during his or her graduate and postdoctoral years probably has the skills and experience to also be able to succeed on his or her own.

In short, search committees seek junior candidates who have a high likelihood of making a smooth transition to being a productive faculty member; a postdoctoral fellowship can enhance this likelihood in their eyes. In addition to the factors mentioned, your marketability and—perhaps more important—your ability to handle a faculty position will likely be enhanced at least in part because of the advantages enumerated below that you can gain from a postdoc.

## Broadening Your Research Domain

As mentioned at the beginning of the chapter, one of the primary reasons that people pursue postdocs is that they offer the opportunity to broaden one's knowledge base. It is becoming increasingly common for departments to seek prospective faculty who can bridge multiple traditional psychology subfields or who have an interdisciplinary perspective. Through a postdoctoral position it is possible to become such a researcher by combining your graduate training with expertise in new areas. This new expertise can come in multiple forms—learning a different discipline, working with a new approach or technique, or studying a different subject population.

into cognitive neuroscience by doing a postdoc in an animal neurophysiology lab; the social psychology PhD who gains statistical expertise by doing a postdoc in a lab that uses advanced statistical techniques, such as structural equation modeling; the clinical psychologist who desires greater research focus than was permitted by the clinical service demands of graduate school;

approach by doing a postdoc in a lab that works primarily with children.

The particular area you may choose for your fellowship will depend on your particular research focus and your interests. However, we wish to stress that postdoctoral fellowships are probably the most valuable if the goal is to broaden one's research into an area that is complementary to rather than fully redundant with the research approach studied in graduate school. The more angles from which you can approach your primary research question, the better.

One of the most important (and perhaps underappreciated) benefits that a postdoc offers is that it is a chance for you to begin to function as

and the personality psychology PhD who incorporates a developmental

#### Facilitating the Transition From Dependence to Independence

an independent researcher without all the demands that tend to accompany one's first faculty position. The transition straight from graduate school to a faculty position can be extremely abrupt. All at once, one loses the continual guidance and deadline structure imposed by most graduate programs and is faced with committee work, teaching, graduate students (in some cases), undergraduate advisees, and the prospect of setting up one's own laboratory and launching a new program of research. Many universities will expect their new faculty to submit grants shortly after arrival. You may be asked to begin reviewing manuscripts for journal editors. In addition, you will need to produce quality manuscripts and to get them published. Furthermore, the expectations for your level of productivity will often exceed the level that you were accustomed to in graduate school. The sudden change can be overwhelming.

A postdoctoral fellowship greatly aids in that transition; as a postdoctoral fellow, you will typically be sheltered from teaching, supervision, and other service-related responsibilities. You will no longer, however, be given the level of guidance you may be accustomed to as a student. There will be no committee checking on your progress, assigning readings to you, or helping you set deadlines and goals. Many advisors take less of a protective, purturing approach with their postdocs than with their graduate students:

nurturing approach with their postdocs than with their graduate students; the view is often that once a person has an advanced graduate degree, it is up to him or her to succeed or fail. The postdoctoral advisor typically

sees his of her role as providing inflatical support, a working achiesphere conductive to productivity, and some amount of guidance. They are unlikely, however, to coddle you. Therefore, this is a chance for you to begin to function independently, and to do so without the multitude of stressors inherent in faculty positions. You can gain confidence and expertise in your research and writing ability in the relative comfort of a secure (if only temporary) job.

## Developing Scientific Skills

Many researchers do not emerge from graduate school completely prepared to be fully independent researchers. We suspect that this is probably the norm.

The ideal incoming faculty member will possess many skills and abilities. He or she will be able to write empirical papers, to initiate and lead large research projects, to develop collaborations, to build an integrated and programmatic line of research, to generate ideas regarding the appropriate next step in extending such a research program, to write successful grants, to give effective oral presentations, to motivate and supervise students, to manage the daily affairs of a lab, to effectively select and purchase equipment, to keep account of a research operating budget, to appropriately navigate the internal review board (IRB), and last, but definitely not least, to be an effective teacher (see chapter 5). The probability that you will emerge from graduate school with all (or even most) of these skills may be unlikely. There is no guarantee that a postdoctoral fellowship will teach you these skills; nor is it absolutely necessary to possess all these skills when you take your first job. But to the extent that a postdoctoral fellowship will allow you to become comfortable with performing most of these duties, it will greatly aid in your transition to your first faculty position.

In addition, it is sometimes the case that the graduate school years are not long enough for one to determine whether they are truly suited for a job at a research-oriented institution or whether a more teaching-oriented job is a better fit. The postdoctoral fellowship can allow you to buy time to exclusively focus on research, and thereby better figure out your research niche or reevaluate the type of career you might want. Note that your potential postdoctoral advisor will probably want to advise someone with research career plans, so it is important to at least go into the position with the desire to succeed in finding a niche in research. Moreover, if you are confident that you would prefer a faculty position that primarily values teaching, a postdoctoral fellowship will probably not be an advisable career choice because it is primarily a chance to beef up one's research abilities and experience and to form a research plan for the future.

training/experience

Everyone has strengths and weaknesses, and we believe that it is worthwhile to periodically evaluate them. Even within your research area, you probably have weaknesses. If your advisor is particularly rigorous methodologically, you may emerge from graduate school with a weakness in theoretical understanding. Conversely, if your advisor is a broad thinker with a penchant for grand theories, you may not pick up all the nuances of rigorous empiricism during your graduate career. To the extent possible, we suggest trying to find a postdoctoral position in a lab that has strengths in your areas of weakness. You will likely be able to offer your new laboratory a set of skills or a theoretical position that will enhance the existing environment. In turn, you will benefit from your new environment. In many cases, the bigger the leap from your existing area to your new area, the more you will learn from your experience.

#### Balancing Personal and Professional Goals

Along with the development in professional abilities during the post-doctoral years will come confidence in your ability to handle the challenges of a successful academic career. We believe that postdoctoral fellowships can be immensely helpful in building confidence in the ability to juggle a near-impossible workload while still finding time to enjoy life. Such confidence comes with the perspective that only additional experience can provide. Anything you can do to diminish the anxiety that is often present in beginning your first tenure-track position will benefit you. The step from postdoctoral fellow to faculty member is simply not as great as that from graduate student to faculty. We do not wish to imply that postdoctoral fellowships are primarily for the insecure; instead, we are suggesting that regardless of a person's confidence in his or her ability, he or she will likely develop skills and perspective in a postdoc that will allow him or her to tackle the first job with greater skill and grace than might otherwise have been possible.

We are consistently amazed at the importance of managerial—people skills in the everyday running of a laboratory. In the academic environment you will be surrounded by people with a range of different motivations, backgrounds, and working styles. It is simply not ideal to try to manage everyone in a similar fashion or to adopt a dictatorial approach. Some people prefer direction, interpersonal contact, and advisor-imposed deadlines, whereas others work best when left alone. Some like to work through the night, whereas others want to leave in time to pick up their children from school. The bottom line is that your job as the head of a lab will be to

more experience you have with viewing the inner workings of laboratories, the more equipped you will be to handle these issues in your own lab. Our advice is to watch how particularly effective mentors interact with their students, postdocs, and staff; also, you might watch the junior faculty (or even the senior faculty) and try to learn from their mistakes. They will inevitably make them! (We have certainly made our share.)

#### Research Utopia

A postdoctoral fellowship offers the benefits of a research career without the burdens. You can take advantage of your advisor's resources to do research that you might not otherwise be able to afford in the beginning of your career. You retain some of the advantages of being a graduate student (guidance and support) without the costs of training-related obligations (classes, theses); in addition, you will obtain some of the advantages of being a faculty member (well, maybe not the parking privileges!) without the costs typically associated with faculty positions (i.e., teaching, committee work, advising). This is your chance to focus solely on research for several uninterrupted years. You can think of it as a several-years sabbatical. If used wisely, a postdoctoral fellowship can be a powerful way to jump-start your research career.

Depending on the job you will eventually take, your postdoctoral years may be the last time for awhile (at least until your own lab group is built) that you have local colleagues who do research similar to your own. Often junior faculty are hired to fill in an area in which a department is lacking. For example, you may be the only developmental psychologist in your department. If so, you will likely miss the intellectual company of being surrounded on an ongoing basis by colleagues who can readily offer insight into your work.

One appealing aspect of postdoctoral fellowships is that, in most cases, not a lot of structure is imposed on you. However, we should note that some postdoctoral environments are highly structured. Typically, you can find out beforehand the general lab atmosphere by talking to graduate students or other postdocs in your prospective laboratory or by talking to your prospective postdoctoral advisor (or your graduate advisor). The funding source will likely play a role in the extent to which there is consistent pressure on you to perform in the postdoctoral position. If you bring your own funding, your time will likely be much more your own than if you are being paid off of a grant to accomplish specific work that your advisor

has committed to doing. Your personality and professional goals will help

determine whether you desire or shun a structured environment.

23

The bulk of this chapter has covered the reasons to consider seriously a postdoc, even when a faculty position is an option. As noted, the reason for emphasizing the advantages of postdocs is that this line of thinking has only recently emerged in the field of psychology. As you have probably surmised, we are strong believers in the potential advantages of a postdoctoral fellowship.<sup>1</sup>

Nonetheless, there are certainly reasons that one might take a job immediately on graduation from graduate school. Most of these reasons are probably familiar to you. Nonetheless, we outline a few of these reasons next.

Some people's personalities are such that they value independence greatly. There are no doubt times in everyone's graduate career in which they become tired of working for someone else and eagerly anticipate the day in which they have no one to answer to directly. An additional issue is that people get more credit for their own work if they are independent faculty members than if they are working in someone else's lab. The head of a laboratory is almost always seen as the principal investigator (PI) on research projects. This desire to be one's own boss is probably one of the biggest attractions of academia. The prototypical academic personality might be said to be the independent, strong-willed person. Such people might be ready to be on their own very quickly, and may shun the idea of working under another's direction for any longer than is necessary. This may be especially true for those individuals who were granted a great deal of independence in graduate school and thrived under those conditions. In this case it may be difficult to move on to a structured postdoctoral fellowship in which there is little freedom to develop one's own ideas.

The people most likely to decline the option of a postdoc are those who want a fast-track career. For such individuals, it is likely that a postdoc will seem like a detour in the way of what they really want—a job that can take them quickly to tenure. It is worth considering, however, that a successful postdoctoral career can lead to going up early for tenure; it is not necessarily the case that these years will be lost time in terms of years to tenure. (Of course, the importance that the goal of quick tenure should play in one's career plans can also be debated.)

You may be wondering about the career choices made by the authors of this chapter. The two of us chose different approaches. One of us (KM) turned down the option of a tenure-track faculty position and took a postdoctoral position out of graduate school. At the time many colleagues argued that this was a risky choice. (As noted, we think the view on this has changed quite a bit recently.) The other of us (TB) accepted a tenure-track job at a research-oriented university before finishing his PhD, primarily for personal (not professional) reasons. Although he is happy with his decision, he sees enormous value in pursuing a postdoctoral fellowship and would have done so had his personal situation allowed it. In sum, although the authors took different routes, we agree that a postdoctoral fellowship offers a unique opportunity, which may sometimes be overlooked.

There may be family considerations in choosing the next step to your academic career. Having a spouse or children often causes people to want to settle down and to minimize the number of moves made. A faculty position will probably be a longer term position than a postdoctoral fellowship. A faculty position will typically pay more than a postdoctoral fellowship, although to the extent that a postdoc enables you to obtain a higher tier job (or to enhance the number of months of summer salary you can later cover off grants), this short-term financial difference may be compensated for quickly.

Of course, family considerations can also lead one to desire a postdoctoral fellowship; if your spouse has a stable job in the city in which you did your graduate work, you may want to stay put for awhile. We strongly suggest that in this case you pursue work in another laboratory and that you still try to use the fellowship as a chance to learn a new area and not just as a

continuation of graduate school.

#### OTHER CONSTRAINTS INVOLVED IN THE CHOICE

As discussed in chapter 1, toward the end of your graduate career you will need to make an objective evaluation of your accomplishments and abilities. You will need to answer the difficult question: How well would you likely do if you were to enter the tenure-track job market? For this you will want to talk to your mentors and trusted senior faculty, who should be able to give you guidance and an honest opinion regarding how your vita might compare to those of other job candidates. If your department is hiring, it might be good to ask if you could see the vitae of the candidates being interviewed. (Although the complete files on job applicants are considered privileged information, vitae are typically treated as public information.) If it appears that your chances on the job market will be poor, you may want to concentrate your efforts on finding a strong postdoctoral position. It may also be the case that your chances on the job market are very strong and you still decide that a postdoc offers advantages that you want to pursue.

As discussed previously, this decision may interact with some personal decisions. Some people may decide to pursue a job even if the chances look slim because they may feel they need this security because of their family situation. Perhaps they need the stability or greater salary offered by jobs (relative to postdocs). Perhaps they have children who need a more stable environment than offered by a postdoc, which is transient. In dual-career families, many job choices are constrained by geographical or personal considerations (e.g., the spouse's career). What might otherwise be your first choice might have to be adjusted by these personal factors. What is best for your career may be somewhat different than what is best for you

when considering the whole spectrum of your life. The result may be a willingness to accept a position that you might not otherwise have chosen.

It is our observation that if you are willing to make concessions, you will likely be able to find either a faculty position or a postdoctoral fellowship. The more attractive your vita, the fewer concessions you will have to make.

#### FINDING A POSTDOC

Chapter 1 explains the hiring process in the field of psychology. Finding a postdoctoral fellowship involves a similar process but is a much less structured endeavor; we highlight just a few of the differences.

Postdoctoral fellowships can arise from candidate-initiated awards. In this case, a senior graduate student will apply to an agency or a foundation for postdoctoral funding. A prominent approach in the United States is through the National Research Service Award (NRSA) program through the National Institutes of Health. For this application, one needs a willing sponsor (i.e., the application is to work with a specific person to carry out a specific line of research, not just to receive money to go to some unspecified school). Foundations also sponsor postdoctoral fellows and have similar procedures, which can be determined by tracking down an application from the foundation. For minority students, there are special programs (e.g., through the National Science Foundation).

Another approach is to identify a willing sponsor who has an existing grant from which he or she could fund you. This might be an individual investigator with a grant or a training grant or center grant, which is given to a larger body of investigators. This initially might seem like a more attractive option; after all, it is a lot less work in that the burden is on the sponsor and not the potential postdoctoral fellow to secure the money. An important consideration, though, is that in all such cases, these positions would require you to conduct a line of research that has been funded. The good news is that there would likely be plenty of money to perform work that you might not otherwise have the resources to perform until you receive your own grant. The downside is that there would be less room for creativity and independence in that the principal investigator would be hiring you essentially to carry out work they have committed to do. You will want to be sure that you are willing and eager to carry out the work they have planned before committing to such a fellowship.

Our primary piece of advice with respect to the application process is to begin early. Asking a potential mentor to sponsor an application that is due in one month is not the way to impress him or her. Rather, it would be a good idea to begin to explore postdoctoral options about a year before one would be ready to begin. The best-fit postdoctoral positions tend to be

those that are lined up early. A number of postdoctoral positions are advertised in the same manner as faculty positions, such as through trade newspapers (the American Psychological Association Monitor, the American Psychological Society's Observer, and the Chronicle of Higher Education), departmental mailings (usually posted in some central location or office) or electronic distribution (bulletin boards, mailing lists, newsletters). However, one critical difference between faculty and postdoctoral positions is that often potential postdoc positions are not advertised widely or at all. In many of these cases, the investigator may have funding available, but is not actively seeking applicants. In such cases, as in those where outside funding is going to be obtained, it is necessary for you to make the first move in determining whether a potential postdoctoral advisor has interest in having you join his or her lab.

Making a first approach to a potential postdoctoral advisor can be daunting. If possible, it is nice to have an introduction (e.g., by an advisor or colleague at a conference). Ask your mentor for suggestions about good fits for a postdoctoral position and see if he or she would be willing to introduce you to these people (and perhaps even be willing to broach the

subject beforehand with the potential postdoctoral sponsor).

If this approach is not an option (and often it is not), we suggest crafting a short letter (to be sent either by standard mail or e-mail) to your potential sponsor. It would be a good idea to include your vita, too. Tell them a little about your research interests and ask if they might be willing to discuss with you the possibility of your joining their lab (either through an existing, funded position or by sponsoring a postdoctoral application by you). Do not expect an immediate, positive response. Your sponsor will likely want to see some reprints, a statement of research interests, to talk to your references, and to hear from you about what you would expect out of the arrangement. If possible, your sponsor will probably want to do an informal interview at a conference or at least talk to you on the telephone. In some instances, the sponsor may fly you out for a formal interview and may even ask you to give a talk to the lab group or even to the department. We suggest treating this stage as seriously as you would an application for a faculty position: Prepare your application materials carefully; dress professionally for the interview; and give a well-prepared, organized talk. One of your major hurdles will be to capture the interest of your potential sponsor.

## MAKING THE MOST OF YOUR POSTDOC

The advice that a postdoctoral fellowship offers significant benefits assumes, of course, that you make the most of your postdoctoral experience. Simply "having done" a postdoc—even in a very high-profile laboratory or

at a prestigious university—will be of little use if you have not seized the opportunity to broaden your research and show evidence of productivity. Having an impressive "pedigree" becomes less critical the more advanced you get in your career; what matters more over time is one's own accomplishments. You will want to enter the job market after your postdoctoral fellowship with concrete accomplishments (ideally in the form of refereed journal articles) and a well-formed plan for the future. In this section, we briefly describe some of our thoughts on how to maximize the success of your postdoctoral fellowship if you choose to pursue one. This topic was recently discussed in length as a special feature in *Science* (1999; see also Feibelman, 1993), and we highly recommend reading these materials for additional advice.

One of the most important potential pitfalls to be aware of is the tendency to lose focus as a result of the lack of structure in postdoctoral positions. There are generally no milestones or specific accomplishments required of a postdoctoral fellow. Nevertheless, you do not want to let up just because no one is keeping close tabs on your progress; you will want to do that for yourself. We believe that the most successful postdocs (and faculty, for that matter) are those who learn quickly to impose some structure in their research lives. This typically means creating internal deadlines for yourself. In general, it is a good idea to know specifically (and realistically) what you want to accomplish in the next day, month, and year. Have a plan. In the best scenario, you may even have a friend or colleague with whom you discuss your plans for the near future; we like to swap a list of goals for the next six (or so) months with another person; you can then help evaluate each other's progress periodically.

In addition, a postdoctoral fellowship is a great time to form a long-range plan for research. Taking a faculty position right out of graduate school may entail a difficult transition as one tries to make the leap from one's dissertation (and small extensions of that dissertation) to novel, independent lines of work. Even if your postdoc involves focused work on a particular grant or project, it offers a chance to think and develop a solid plan for pursuing your own research program on beginning your career as an assis-

tant professor.

In the event that you do not yet have a strong vita, a postdoc can offer you the chance to "catch fire." The chances to perform the following activities will vary from situation to situation. Certainly you will want to spend a great deal of time writing papers and leading projects during your fellowship. If possible, it would also be good to begin to supervise other students (usually undergraduate students). Forging collaborations with people other than your postdoctoral sponsor is a good idea if it is possible, although if you are funded by a grant to your sponsor (and do not have your own money through an NRSA or another mechanism), this may not

be an option. Even if formal collaborations are not possible, however, you can always talk to other people in your department, learn about their interests, and generally try to soak up the culture of the department. One useful way to begin such discussions might be to volunteer to give a talk at a departmental seminar series; in addition to giving you speaking experience and the chance to obtain feedback on ideas, it opens the door for interested colleagues to talk to you about your work. Another good idea is to join, or better yet, start up a journal club as a way of beginning discussions with others in the department who share your research interests. Similarly, attending departmental talks will give you the opportunity to learn about work being done around you and might lead to interesting discussions (and possibly collaborations) with colleagues.

You may also want to talk to your advisor about potential opportunities to begin reviewing manuscripts for journals. He or she can suggest ways in which you might do this. Included in these might be your advisor requesting permission from journal editors to pass on manuscripts to you that they do not have time to review or encouraging you to write journal editors to portray your willingness to review for the journal (including a very brief, two- to three-sentence summary of your research interests and areas of expertise). If possible, you might ask your advisor to read your first few reviews before submitting them; they may be able to suggest changes in tone or approach that might enhance the effectiveness of your review.

Similarly, you may want to begin learning about the grant writing process during your postdoctoral years. If your mentor is working on a grant, it may be possible to assist in the process. Simply learning the structure and organization of grants may prove invaluable experience. In some cases (e.g., people who are considering future appointments in medical schools or people doing research requiring great expense), learning to write grants will be one of the most important achievements of the postdoctoral years.

One tendency we have noticed is that postdoctoral fellows can sometimes become a bit isolated from the rest of the department, especially in departments in which there are only a few postdocs. Postdocs are sometimes left out of faculty and graduate student events simply because they do not fall into either category. We think this oversight can be overcome, but it might be something to consider working on if you do decide to take a postdoc. One suggestion is to talk to people, try to make contacts among various groups of people, and get on e-mail lists (of talks, departmental events, etc.), and generally make yourself known (in an appropriate way). In addition, it is worthwhile to network and link up with other postdocs, so that you become more visible as a departmental group. The more people see you at events to which you are invited, the more they will think of you as part of the departmental community and remember to include you. That said, it is also the case that given your limited time in a postdoctoral position,

it does not make sense to pour yourself into making countless social contacts at the expense of work, only to find yourself moving again in a couple of years. After all, the primary goal is typically to accomplish as much work as possible within a short period of time and then move on.

#### CONCLUSION

Choosing the ideal next step after graduate school can be difficult. No single answer applies to everyone. In addition, there is probably no right or wrong answer for most individuals; productive, ambitious, bright people will succeed in the field regardless of where they begin their postgraduate career. We have tried to outline some of the factors that may enter into your decision with a focus on some of the advantages and disadvantages of postdoctoral fellowships. Regardless of how you spend your first few postgraduate years, we encourage you to make the most of whatever situation you enter.

#### REFERENCES

Feibelman, P. J. (1993). A Ph.D. is not enough! A guide to survival in science. Reading, MA: Addison Wesley.

Postdocs working for respect. (1999). Science, 285, 1513-1535.