

There are also moves to create new types of non-tenure-track positions — particularly at medical schools. Van Ummersen says that medical schools are filled with full-time non-tenure-track positions; mainly clinicians who teach and conduct research. Typically, staff are hired through the hospital, rather than by the medical school or university, to keep pace with the hospital workload. The positions come with promotional opportunities, but unlike tenure-track positions, they carry no penalty if the requirements of promotion are not achieved. The University of California's outgoing provost, Lawrence Pitts, expects that universities will follow suit and create different types of faculty positions to meet the needs of the institution. But, given their traditional conservative approach to faculty governance, those changes will be evolutionary rather than revolutionary, he says.

Trower says that not having to worry about tenure can give researchers certain freedoms. "Junior faculty members often don't take as many risks if they need publications to get tenure," she says. She suggests that breakthrough science often comes from places such as interdisciplinary centres at universities, which, unlike departments, are typically filled with non-tenure track positions.

"Young scholars tell me that they are happy on non-tenure-track lines because they have a life and a sense of balance," says Trower. Goulden's data on why early-career researchers elect to leave academia bolsters this idea (M. Mason, M. Goulden and K. Frasc *Academe* 95, 11–17; 2009). "Our survey data show that young researchers believe the hours are long and the possibility of having work–life balance diminishes if one seeks tenure," he says.

Hugo is convinced that, at least in Australia, the prospects for young academics are still good. But, he says, universities need to build more flexibility into recruitment schemes to deal with the constraints imposed by people working longer.

Van Ummersen says that there are opportunities for universities to be creative — for example, establishing 'half-time' tenure-track lines that could be split between early-career researchers and faculty members entering phased retirement agreements — to help meet career and personal issues for both junior and senior faculty members.

"Universities have only begun to change the way they adjust to the needs of faculty members," says van Ummersen. "The university was invented for monks in monasteries. That model doesn't fit the twenty-first century." ■

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COLUMN

The postdoc dilemma

Balancing a career and the obligations of a full-time job can be deceptively difficult, says **Gaston Small**.

As a graduate student, I overheard a faculty member advise a colleague to include funding in a grant proposal for a graduate student rather than a postdoctoral fellow. The reason? "Postdocs spend all their time writing papers from their dissertation work," she said. I vowed that, when I became a postdoc, I would not let paper and grant writing disrupt my research in the laboratory.

Fast-forward five years. To my dismay, I do spend much of my time writing and revising manuscripts, many of them from my previous work. I see this as part of the postdoc's primary challenge: balancing a job and a career.

Although I have published six papers from my dissertation work, I have several other manuscripts from the same project competing for space on my desk and weighing on my conscience. Each paper represents collaborations with other early-career scientists, and I am acutely aware that delays affect their careers, as well as my own. I give priority to work related to my current position, but when there are lulls, I dedicate several days to revising one of these old manuscripts in the queue.

Once, at a workshop for early-career researchers, a panellist warned us that it was unethical for postdocs to spend time working on projects other than the one that pays their salary. Yet, when I confessed this transgression to my supervisor, he told me not to worry. I will be writing papers from our current project for years to come, he said. And, hence, will be siphoning time from future projects. It is the perpetual circle of grant-writing life.

The job–career balance is a fundamental challenge for postdocs. Fulfilling the obligations of the project that currently pays your salary is, of course, essential, but at the same time postdocs need to push previous work through the publication process, which often entails multiple revisions. Writing grant applications, and applying and interviewing for faculty jobs are necessary activities; two years of postdoc funding runs out quickly. These additional responsibilities to our careers are as time-consuming as obligations to our full-time jobs.

Perhaps this juggling act is necessary preparation for a career in academia. When I first started as a graduate student, I had a romanticized notion of academics leisurely discussing the fundamentals of ecology with colleagues over a coffee or a beer, sketching graphs on the backs of napkins and filling a blackboard



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with equations. The reality has been quite different. The faculty members with whom I've worked are chronically busy. A friendly "how's it going?" to a colleague in the hall is always met with, "oh, really busy this week!". I too have adopted this response. There is always a deadline looming for the next proposal. There are committee meetings, classes to prepare for and students to advise. Responding to e-mails can take the better part of a working day. This routine does not leave much time for pondering big ideas, or catching up on the backlog of old papers that need to be written.

Embracing this culture of academic life is an important part of the postdoc journey. There is often a tension between current job and peripheral obligations. At least part of the solution is clear communication with your supervisor. When applying for a postdoc, you should find out exactly how you are expected to spend your time and check regularly with your supervisor to make sure that your productivity is meeting these expectations.

After two years as a postdoc, I am still learning how to balance these competing obligations. Last week I received an e-mail from a PhD student who worked with me as an undergraduate during my PhD research. He wanted to know the status of a manuscript I am supposed to be revising. I was mortified when I realized that I had not opened the file in fourteen months. Sorry, Pedro. I'll get right on that. ■

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