

## MAKE WAY FOR THE NEXT GENERATION: JUNIOR FACULTY ARE MOVING IN

Universities across the United States and Europe are increasingly reshaping recruitment policies in order to attract and retain more junior faculty. Replacing the old sink or swim attitude is a desire to provide a more supportive and nurturing environment. Driving the new trend are several factors, including a concern that many of today's senior faculty are approaching retirement age and will need to be replaced, and a desire to have faculty that more closely reflect the gender and ethnic diversity of the population they serve.

By Julie Clayton

Private universities such as Harvard, Yale, and Princeton have historically hired more at senior levels—tending to hire the most distinguished scholars they could find. Junior faculty would be hired for three to six years and then had to move elsewhere. That has changed a bit, and they tend to be hiring more junior faculty now, which includes efforts to recruit women and minorities into the sciences.” These are the words of **Bob Berdahl**, president of the American Association of Universities (AAU), describing what appears to be a widespread shift in the hiring paradigm for junior level faculty in the United States.

### The Aging Work Force

When **Debra Auguste** decided to leave Princeton last year for a position at Harvard University, it was because Harvard today is attempting to move away from its past reputation for failing to support junior faculty. Taking up the post of assistant professor in the Harvard School of Engineering and Applied Sciences, Auguste has been given every encouragement to consider this as a place to establish her long-term research career, with a good chance of obtaining tenure.

“They really are pushing to develop junior faculty and they’re investing a lot in each and every one of us,” she says. The investment included a generous startup package—a custom-designed laboratory of around 1,600 square feet for the study of embryonic stem cells and tissue engineering. “Everything was put into place to be as I designed it. If I don’t succeed, it rests on my own shoulders.”

Another new recruit is **Hopi Hoekstra**, who moved from the University of California, San Diego to become an associate professor in the Harvard Department of Organismal Biology—a tenure-track position that will be reviewed after three years. Hoekstra studies ecological genetics with wild mouse populations, trying to understand how changes in DNA can alter fitness and survival. She brought a total of five students and postdocs from California, and has recruited an additional five since arriving last year.

Like Auguste, Hoekstra credits the “amazing resources” and “incredibly supportive environment” as the key attractions of Harvard, including a newly established junior faculty mentoring program. “I really feel like senior faculty are amazing mentors. They’ve had to go through the process and scientifically they’re strong.”

“Historically, Harvard has the reputation that it doesn’t treat faculty well—that it’s hard to get tenure. Harvard would more often appoint a senior person, a leader in their field, and junior faculty did not measure up. says **Andrew Biewener**, chair of the Department of Organismal Biology where Hoekstra is based. “But the view we take now is that it’s the younger people in the faculty who are most likely to be doing cutting-edge research. We’re trying to hire the best, who will advance in their careers and receive tenure, in our department and in the life sciences generally.”

### The Retirement Boom

Harvard’s sizable endowment enables it to put financial muscle behind [continued »](#)



Debra Auguste

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## Faculty Positions

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—Alan Fogelman



these changes, but publicly funded universities also seem to be improving the prospects for junior faculty. For some institutions, this may prove critical for survival, especially given the expected retirement of many senior faculty over the next decade.

At the University of North Carolina, Chapel Hill, for example, the faculty retirement rate is predicted to double over the next 10 years, with at least 500 faculty retiring. This is the cohort of faculty born during the postwar baby boom era of the 1950s and 1960s, who joined expanding university faculties during the 1970s. “It was an unprecedented time of growth and hiring. And that means we have a very large bolus of faculty members moving up the age scale,” says UNC associate vice chancellor for research and economic development, **Bob Lowman**.

Lowman has recently compiled a report for UNC’s vice chancellor on the future of UNC’s faculty, using statistics from the National Science Foundation as well as those of UNC. He warns that UNC will need to recruit “unprecedented numbers of new faculty members at the same time as other American universities will be trying to do the same.”

The problem of retiring faculty is compounded by a high proportion of temporary staff to tenured faculty, hired to do the “heavy work” on large interdisciplinary projects, according to Lowman. This means that despite a 30 percent rise in faculty numbers over the past 10 years, the number of tenure-track positions at UNC has dropped by 4 percent. The result is a “two-tiered system of faculty” in which fixed-term faculty have no right to tenure, and can continue for up to 20 years with their salaries dependent on grants.

While this may be good for research, Lowman cautions that when the predicted mass retirement among faculty takes place, there may not be sufficient numbers of tenure-track faculty to replace them, and those on fixed-term contracts may go for tenure elsewhere.

“There is concern among a lot of institutions about the aging of the faculty,” notes Berdahl of the AAU. He points to the recent removal of mandatory retirement at the age of 65 in the United States as an additional factor, encouraging more workers to postpone retirement. A delay in retirement can impede the appointment of new junior faculty. At Harvard, “Senior science faculty tend not to retire—they stay on for as long as possible, and this creates a problem

in the demographics. We need to make sure they see advantages in retiring at a reasonable time. That’s a challenge.” notes Biewener.

University of California, Berkeley, where Berdahl was chancellor, tackles the problem by using special funds to promote early retirement among senior faculty, permitting them to continue doing research part time and some teaching. “The virtue for the institution is that it frees up some of the salary. This is becoming more common practice and encourages universities to hire junior faculty,” says Berdahl. He adds that recruitment of junior faculty is often preferred nowadays because it tends to be less expensive than recruiting senior faculty – who “tend to bargain for more startup costs.”

Other institutions are confident that they will remain successful even if competition intensifies in future. The UCLA Department of Medicine, for example, which has more than 600 faculty members working across two hospitals, in Westwood and Santa Monica, California, has seen its research funding grow from an annual turnover of \$22 million in 1992 to more than \$125 million this year. “We’re continually growing. We’re so big and we recruit so much that [the aging faculty work force] is not a significant issue for us. There won’t be any vacancies,” says **Alan Fogelman**, director of the Specialty Training and Advanced Research (STAR) program, and executive chair of the Department of Medicine.

The STAR program ensures a smooth entry of highly qualified physician-scientists into UCLA faculty, by offering tenure-track positions to selected medical school graduates in which they can undergo rigorous scientific training at the same time as doing their clinical residencies. It enables graduates who would not otherwise have chosen this path to realize their interest in science at a later point. “Along the way they get bitten by the science bug and want to do research.” says Fogelman.

Since 1994 there have been 72 graduates from the program, awarded either Ph.D.s or Masters in clinical bioscience, with the majority choosing to remain in research. Half have gained positions as either clinical instructors or assistant professors at UCLA, with the possibility of becoming fully tenured associate professors upon evaluation, while the remainder have gone on to successful positions all over the world, mostly in research.

### The European Perspective

These initiatives are not occurring only in the United States. In the UK, for example, there also is an increasing recognition that the career paths of junior researchers need to be better established, with more support for gaining tenure. The Academic Fellowships program run by Research Councils UK (the umbrella organization that disburses government funds of £3 billion to university-based research) aims to achieve this. The program, started in 2005, provides five years of funding to promising postdoctoral researchers and a guarantee of tenure. This can also include a six-month sabbatical to spend in a laboratory elsewhere.

One recipient is **Bram Snijders**, originally from The Netherlands, who *continued* »

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www.aau.edu

Brown University  
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Department of Organismal Biology  
www.oeb.harvard.edu

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Museum of Comparative Zoology  
Harvard University  
www.mcz.harvard.edu

STAR Program, UCLA  
www.star.med.ucla.edu

University of Kentucky  
College of Arts and Sciences  
www.as.uky.edu

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came to the University of Sheffield in 2002 to do his Ph.D. in chemical engineering before taking up a postdoctoral position in the same department. He had to impress RCUK with far longer term research plans than would be expected for a routine three-year postdoc, but the reward was worth it.

“It is a good career path. I notice that a lot of my colleagues are worrying about what the next contract will be. It’s easier for me to plan ahead for the future, in both my professional and my personal life. I’m trying to set up collaborations both within and outside the University of Sheffield.”

Snijders will spend the first three years doing postdoctoral research funded largely by the Biotechnology and Biological Sciences Research Council (BBSRC), and then two years in transition, applying for grants as an independent investigator and training in other skills including public outreach, before taking up his tenured post in which he will spend 50 percent of his time teaching. In contrast, he sees colleagues either leaving academia for industry or lowering their ambitions altogether by applying for technician posts, for the sake of a permanent job.

As in the United States, there are fears in the UK that “the current level of retirement is not being matched by new recruitment and retention within particular disciplines,” according to a report by RCUK. The UK research base is aging, with the proportion of academic staff aged over 50 increasing from 24 percent to 28 percent between the years 1999 and 2005. Certain disciplines fare worse than others, with more than 30 percent of mathematicians aged over 50. Added to this are concerns that overall academic staff numbers are declining in some disciplines such as chemistry and engineering. Underlying the recruitment problem is the increasing attraction—especially for those in senior posts—of higher salaries in the private sector.

### Mission: Retention

For universities on both sides of the Atlantic, recruitment of junior faculty is but the first hurdle. Then comes the challenge of retention. One initiative that is gaining in popularity for retaining junior faculty is mentoring.

At Harvard, this is increasingly becoming a formal practice. “We’re looking at better ways to mentor—such as through having shared discussions. Before now we viewed it as important but it was more informal. Now, having a more formal program means that we can evaluate how it should happen,” says Biewener.

For Auguste, this has been an important activity. “I saw faculty who are pillars in their areas and I thought that they’d not want to reach out to me. But I’ve had some really generous offers. People were very open and willing to connect. I had not seen this for friends who are professors at other top universities,” says Auguste.

Smaller universities too are developing new initiatives in order to boost their prospects for attracting and retaining more faculty. At Brown University, mentoring is one of several activities funded through a major grant of \$3.3 million from the National Science Foundation under its nationwide ADVANCE program. The program is open to both men and women, but it is viewed as especially beneficial to the retention of women scientists and engineers, who have traditionally felt less supported.

“Smaller colleges tend to do more about faculty development. We’re a small university but we’re research intensive,” says **Pamela O’Neil**, associate provost for policy and planning at Brown, and prin-



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cipal investigator of the ADVANCE project.

Mentoring is also proving useful at UNC for helping new faculty to adapt—especially those recruited from outside the traditional fields of a particular department. At the School of Pharmacy, for example, “Before, most faculty did residencies and graduate programmes in pharmacy. Now we’re recruiting molecular biologists and chemical biologists, chemists or engineers,” says **Bob Blouin**, dean of the school.

To help them overcome potential barriers of coming from outside the profession, the School of Pharmacy has introduced a junior faculty mentoring program, now in its second year. “They find it a big attraction because they don’t feel like they’re in that all alone,” says Blouin.

### Plenty of Perks

Junior faculty can also look forward to other kinds of support, such as parental leave and a stopping of the “tenure clock” for those starting a family. This means that the time taken out to care for children is not included in the period over which junior faculty are evaluated for tenure. Two years ago, Princeton University and the University of Michigan became the first to offer this as an automatic right to any new parents. The trend is now spreading, and the same policy was adopted in June this year at the University of Kentucky. Already, the university is reaping rewards by attracting more women.

“We advertised this policy a lot this year, and of the last 35 new faculty recruits, 16 were women—one of the highest [proportions] we’ve had for many years,” says **Leonidas Bachas**, associate dean for academic research in the University of Kentucky College of Arts and Sciences.

New faculty can also look forward to a new emphasis on developing their teaching as well as research skills. UNC sees this as an important way of meeting its mission for teaching and training the region’s future scientific work force.

“Most of the public domain expects public universities to create manpower for new industries as communities transform from old to new economies,” says Blouin.

Junior faculty have the enthusiasm that he believes is a key quality for teaching.

“Some of our best scientists are often our best teachers. We want to give them a forum to share that with their students and show their passion for their work,” says Blouin. Although the additional support and perks will help, it is essentially this passion that will turn today’s junior faculty into tomorrow’s professors, department heads, and deans.

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