

MID-CAREER MASS EXODUS

A 'great resignation' wave among academics has many researchers stepping off the tenure track. **By Virginia Gewin**

On 4 March, Christopher Jackson tweeted that he was leaving the University of Manchester, UK, to work at Jacobs, a scientific-consulting firm with headquarters in Dallas, Texas. Jackson, a prominent geoscientist, is part of a growing wave of researchers using the #leavingacademia hashtag when announcing their resignations from higher education. Like many, his discontent festered in part owing to increasing teaching demands and pressure to win grants amid lip-service-level support during the COVID-19 pandemic.

He is one of many academics who say the pandemic sparked a widespread re-evaluation of scientists' careers and lifestyles. "Universities, spun up to full speed, expected the same and more" from struggling staff members, he says, who are now reassessing where their values lie. The demands add to long-standing discontent among early-career researchers, who must work longer and harder to successfully compete for a declining number of tenure-track or permanent posts at universities. And Jackson had another reason. He received what was, in his opinion, a racially insensitive e-mail that constituted harassment and alluded to using social media to police staff opinions, which, he says, was the last straw. Jackson filed a formal complaint and the University of Manchester responded: "The investigation has now concluded. We have made Professor Jackson aware of its findings as well as the recommendations and actions we will be taking forward as an institution."

The level of unhappiness among academics was reflected in *Nature's* 2021 annual careers survey. Mid-career researchers were consistently more dissatisfied than were either early- or late-career academics (see 'Mid-career malcontent'). In the United Kingdom, pension cuts have worsened ongoing university-faculty strikes. Now, researchers in secure, long-term posts are quitting. "For mid-career individuals, it says something much more significant if they have got a mortgage, car and kids – and still are leaving," Jackson adds.

Karen Kelsky has watched conditions in academia deteriorate in the 12 years since the cultural anthropologist left her post at the



Many mid-career scientists are leaving academia for greener pastures in industry.

University of Illinois at Urbana-Champaign to become a career coach. Grievances include a lack of support, increased workloads, micro-management, increasing right-wing hostility towards academics and salaries that have not kept up with cost of living, says Kelsky, who is based in Eugene, Oregon, and wrote the 2015 academic-career guide *The Professor is In*. The pandemic set the stage for a mass exodus. "COVID-19 is the straw that broke the camels' backs," she says.

In early 2021, Kelsky, seeing a dramatic shift in discontent, started *The Professor is Out*, a

private Facebook group for higher-education professionals to share advice and support for those who are leaving academia. It has grown to more than 20,000 members in the past year. "What's wild is how many of them are tenured," she says. "The overwhelming narrative is that people are happier once they leave academia."

Higher education has not escaped the 'great resignation' – the international wave of worker resignations that began in 2021, including a record 47 million US residents and 2 million UK adults, largely because of the consequences of the COVID-19 pandemic and stagnant wages.

Work / Careers

Nature spoke to more than a dozen scientists leaving academia, who describe toxic work environments, bullying and a lack of regard for their safety and well-being as factors in their decisions. A 2018 study predicted that higher education would lose half to two-thirds of its academic workforce to retirement, career burnout or job dissatisfaction within five years (T. Heffernan & A. Heffernan *Prof. Dev. Educ.* **45**, 102–113; 2018). Established researchers might have the privilege to leave willingly, but many are unsure how their skills will translate to other sectors. Others who face systemic racism and sexism are finding themselves forced out, partly owing to structural biases. Their exits threaten progress on diversity, equity and inclusivity in the academic workforce.

Reasons for leaving

On 31 March, Caspar Addyman, a developmental psychologist who studies babies' emotions at Goldsmiths, University of London, announced his resignation, effective in June, on Twitter. His resignation letter cites, what was in his opinion, faculty frustration with university mismanagement, which has culminated in "a massive vote of no confidence [in senior administrators], countless individual appeals and testimonies and unprecedented local strikes". But it was the 38% cut to his pension that finally pushed him to leave.

"I could imagine spending the rest of my life figuring out why babies were happy, but after seven years, it became too hard to imagine doing this grind forever," he says, referring to increasing administrative responsibilities and what he describes as an ever more regimented approach to teaching. Although being an academic felt like his identity, Addyman didn't consider moving to a different institution. "Why stay in this world if it's just going to be a slightly different version?" he asks.

Facing a hostile funding environment and rising costs, Goldsmiths has announced 20 staff cuts so far. A Goldsmiths spokesperson says: "We recognize how deeply upsetting and painful this period of change has been, and continues to be, for our community as we make some difficult decisions to ensure Goldsmiths has a sustainable future. We will continue to support and advise all those affected with comprehensive careers support."

Similar workforce reductions have occurred in Australia, a country hard-hit by the loss of revenue from fees for international students, who could not enter the country owing to COVID-19 restrictions. By May 2021, one in five academic jobs in Australia had been cut. "Now, we're seeing a lot of people look for work elsewhere, or retire if they can afford it," says Lara McKenzie, an anthropologist who studies academic-workforce trends at the University of Western Australia in Perth. Those who remain lose trusted colleagues and don't want to take on the massive workloads left behind, she adds.



Nazy Pakpour left academia for industry after being offered tenure but not a promotion.

Naomi Tyrrell, a social-research consultant based in Barnstaple, UK, set up a Facebook support group in 2020 called AltAc Careers UK to help people transition out of academia. Before COVID-19, she says, the most visible exoduses were from biosciences, computing and medical sciences – disciplines with obvious research opportunities in the private sector. "That's changing a bit. [Being overworked] is a key factor right now" for those in all disciplines who are planning to leave, she says.

"This is a sad realization for someone like me. I've beaten so many odds, but I can't beat this odd."

The shift towards the for-profit model of UK university management has also frustrated people. As student enrolment increases, so do precarious contract-based positions – as well as complaints from staff about being taken for granted. "I hear things like, 'Nobody said thank you or asked if I was OK or how the university could support me,'" she says.

Jess Leveto, a sociologist at Kent State University in Ohio, hears similar grievances – particularly from academic mothers – in the United States. "For a long time, people invested in the ideal-worker mentality of 'I'm going to produce as much as I can and show them I'm a good employee but the care wasn't reciprocated,'" she says.

Leveto has surveyed roughly 1,000 US university faculty members over the past two years to monitor how the pandemic affected

career outlooks, but has not yet published the results. In 2021, she says, respondents were angry and frustrated because they felt universities were too eager to put them back into classrooms amid pandemic safety concerns.

Leveto started a Facebook group called PhD Mamas in 2015 as a support system for academic mothers. It had fewer than 1,500 members, for years. Now, it has roughly 12,000 – and a dedicated subgroup of more than 300 mothers exploring how to leave academia. Mothers in academia have had a stressful time: bogged down by childcare demands during the pandemic, many women's careers suffered much more than men's (M. I. Cardell *et al. Ann. Am. Thorac. Soc.* **17**, 1366–1370; 2020).

Stacy, a psychology researcher at a US west-coast university who requested anonymity because she's interviewing for industry jobs, tears up when explaining how she knew she wouldn't become a full professor: "My productivity tanked trying to take care of a one-year-old during the early stages of the pandemic and quarantine, with no meaningful structural supports to offset the challenges." She requested – but did not receive – a reduced teaching load, reduced time on university committees, teaching assistance and research support in the form of tuition breaks for graduate students.

In January 2022, she started sending out applications for industry positions that pay double her current salary. In some fields, such as hers, undergraduates and graduate students often receive no stipends. "My research happens because of free labour," Stacy says, and she no longer wants to enable these conditions for the next generation of researchers.

Avoiding complicity in the inequities of

academic training is contributing to mid-career researchers' resignations, says Meredith Gibson, interim chief-executive of the Association of Women in Science, a Washington DC-based advocacy organization. She and Kelsky anticipate the wave of resignations will continue. "There are people who will take roughly 18 months to lay the groundwork to pivot," Gibson says. "I don't think it's over."

Pushed out by systemic bias

Women of colour interviewed by *Nature*, in particular, describe how systemic inequality leaves them struggling to attain job security. Mary, a cancer biologist at a high-profile private university in the northeastern United States, has fretted for months over her pending grant application at the US National Cancer Institute (NCI). If she doesn't secure a major grant this year, she will have to leave her position.

Mary, who has asked for anonymity to protect her job prospects, blames structural bias and a lack of resources for holding her research back. In November 2008, she was hired for a chemical-engineering position at a public university in the southern United States; the role was created with funding available specifically for a qualified candidate from an under-represented background. But she was hired at the last minute who started alongside five others in the department, and she felt she was given inadequate lab space and no access to the equipment and mentoring she needed to secure NCI funding and tenure.

Although she didn't get the job security or the pay increase that comes with tenure, her research record was good enough to get her to her current, more prestigious institution – although she has been stuck at the same pay rate for more than ten years.

It's hard for Mary to accept that her academic career could soon be over. "This is a sad realization for someone like me. My mom doesn't have a formal education, my father died in a homeless shelter," she says. "I've beaten so many odds, but I can't beat this odd."

Nazzy Pakpour, a biologist who is a queer Iranian-American mother, resigned from her position at California State University, East Bay (CSUEB) in Hayward after she was offered tenure – but not a promotion – last October. The committee found that her portfolio of achievements met the criteria for her to get tenure, but denied her promotion to associate professor and a rise in pay owing to a lack of research productivity. "It all seemed very arbitrary and personal to me," says Pakpour, who studies parasitic infections. "If you hire someone, invest this much time and energy, then why be punitive? If someone is underperforming, clearly communicate that in the five prior reviews," she says, referring to the lack of feedback before she was up for promotion.

She says her university had written guidelines for tenure and promotion evaluations,

but her department had not. Departments without explicit written criteria leave the door open for implicit biases against women and people of colour to tank their chances of promotion, she says. CSUEB's biology-department chair, Brian Perry, confirms that Pakpour was given a written 'faculty development plan' outlining expectations when she was hired in 2015 – but noted that the department does not have its own written guidelines for promotion.

Since February, Pakpour has been a senior scientist at a biotechnology company in Davis, California. Her salary is higher, she works 40 hours a week, instead of 80, and she feels supported. "Knowing your worth is really important," she says.

Post-exodus workforce

Will staff cuts and widespread resignations hamper faculty recruitment efforts? Some institutions are working hard to prevent that. In 2018, Barbara Boyan, dean of the college of engineering at Virginia Commonwealth University (VCU) in Richmond, and Susan Kornstein, executive director of the VCU Institute for Women's Health, won a US National Science Foundation ADVANCE grant to increase recruitment, retention and advancement of diverse science-faculty members who are women. VCU Engineering did not lose any female faculty members because of the pandemic, says Boyan, who credits the grant – worth US\$3 million over five years – with preventing the loss of women.

In 2021, two of three tenured women of colour have achieved the title of full professor at the engineering school – in part owing to nudging from Boyan. "Somebody has to tell them, 'You are ready,'" she says. Kornstein adds that having so few professors from minority ethnic groups to mentor through advancement is "why recruitment and retention initiatives are so important".

McKenzie, who studies the Australian workforce, wonders how these dynamics will shape academia for budding researchers. Will institutions bring in more junior people and replace longer-term contracts with shorter ones, she asks, thereby increasing instability?

Sarah Tashjian – a postdoctoral neuroscience researcher at California Institute of Technology in Pasadena, who is the first in her family to attend university – is watching current events play out on social media. She thinks the tenure denials in the past year will change academia by accelerating loss of talent at early-career levels. Gibson anticipates that the academic job market is in for a rocky stretch – in part because the current wave of departing academics is happening amid a larger cultural shift, she says. "It's [now] surprising to think you'd go into a tenure-track position and be somewhere for your whole career," Gibson says.

Tashjian laments how career goal posts keep shifting. "When I started in 2015, ten

Mid-career malcontent

Researchers in the middle of their careers are unhappy with their prospects.

Nature's 2021 salary and satisfaction survey offered a snapshot of the working conditions and quality of life of researchers around the world. The survey drew responses from more than 1,200 researchers who identified as mid-career, a stage of scientific life that comes with particular challenges and uncertainties. Taken together, the results help to explain why many mid-career researchers are rethinking their paths.

Thirty-seven per cent of mid-career researchers were dissatisfied with their current position, a degree of dissatisfaction that set them apart from both early- (32%) and late-career (32%) researchers.

For mid-career scientists, uncertainty about the future looms larger: nearly one-quarter (24%) said they were extremely dissatisfied with their opportunities for career advancement. By comparison, 17% of early-career and 19% of late-career researchers had that level of doubt.

Mid-career researchers often face duties and administrative tasks that go beyond the lab. In the survey, 34% of researchers at the mid-career stage said they were unhappy with the amount of time they have for research. Twenty-one per cent of early-career researchers and 28% of late-career researchers echoed that complaint.

Forty-one per cent of mid-career researchers – compared with 32% of early-career scientists – reported that organizational politics or bureaucracy frequently or always frustrated their efforts to do a good job.

Research by Chris Woolston.

first-author papers would write your ticket anywhere," she says. "I have 29 publications and 16 of them are first-author." But she's unsure whether it's enough to secure a tenure-track position. She's giving herself three years on the academic job market before she'll change her tack and look for industry positions. "[My team] studies motivation and irrational decision-making," she notes. "At a certain point, it doesn't make sense to continue what we call 'costly persistence'."

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