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Open communication and flexibility can help to make any principal investigator's departure a smooth one.

HOW TO HANDLE A SUPERVISOR'S SUDDEN DEPARTURE

Principal investigators change institutions, take sabbaticals and sometimes depart academia altogether, leaving students in the lurch. **By Nikki Forrester**

"I don't want to be here, and I can't get out," says a geosciences student who started her PhD programme in 2015 and has no clear end in sight. "I want to find a postdoc and get the mentorship experience I'm not getting currently, but I can't finish my dissertation."

During her first year, she found out from several graduate students that her adviser had taken a position at a new university. When she

asked him about the transition, she says, he assured her that everything would be fine and that she could either change institutions with him or be mentored from afar. She was in the process of buying a home with her partner, so she decided to stay and be advised remotely. Now, seven years later, she is still struggling to find the support that she needs to complete her dissertation and secure a job – nearly two years after she should have graduated.

Principal investigators (PIs) can depart their institutions for many reasons while they are actively advising PhD students and postdoctoral researchers. Students must then work out whether they can move with their PIs, switch advisers or transition to remote supervision, or devise another solution to complete their degrees. "We want PIs to be able to move," says Jennifer Polk, a career coach for PhD students, based in Toronto, Canada. "But the impacts

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of that move on PhD students can range from none at all to them not finishing their degrees, depending on what happens next.” According to Polk, PIs need to tell their students about their plans as soon as possible and be transparent about what their students’ options are.

Nature spoke to junior researchers, a PI, a career consultant and a dean about the impacts of an absent PI and what PhD students and postdocs can do to stay on track. Three interviewees, including the geoscientist mentioned above, requested anonymity owing to concerns that sharing their experiences could harm their careers.

Absentee impacts

“The PI is a preponderant person in a student’s life, so anything that disrupts the PI’s career very much disrupts the student’s career,” says Polk. PIs provide early-career researchers with administrative assistance, research support, funding, technical knowledge and career guidance. No wonder, then, that an absent or departed PI can make PhD students feel uncertain about their path forwards.

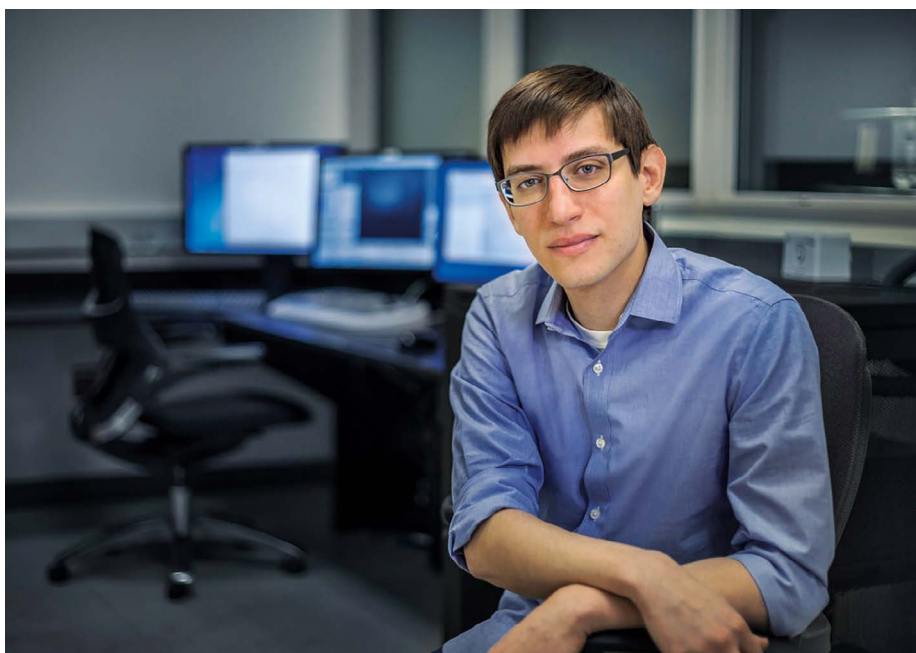
A second PhD student told *Nature* that her PI left in November 2020, three months after the start of her doctoral programme at an institute in India. The student, who asked not to be named, says: “I had no idea what was going on.” After hearing rumours from other graduate students that her adviser was planning to resign, he assured her that nothing was going to happen to her, she says.

Owing to stress and uncertainty, she says, “I couldn’t do any productive, substantial work during that month.” Then in January 2021, another professor at her institute called to check in and inquire about her research progress. “That was a good moment for me. I got this feeling that somebody is here who knows that I exist,” she says.

Now, she is advancing towards her degree under the co-guidance of the professor who reached out to her, who has expertise in law, as well as her original adviser, an anthropologist. The PhD student appreciates their different perspectives and is grateful that they get along well and are upfront about where their knowledge is limited. “We have Zoom calls together. I’m benefiting from both of them,” she says.

She typically meets with her supervisors weekly or biweekly. Although she wishes she had more in-person interactions with them, she says that, because the COVID-19 pandemic forced a shift towards virtual meetings, her advising situation feels much more normal.

Financial support for PhD students can be derailed when a PI leaves unexpectedly. For example, the geosciences PhD student was guaranteed three years of funding from her PI’s grant, but when he changed institutions, the funding was gone. “I went three months without pay with no warning,” she says. “Once he left, there was no recourse. There was never



FRANK VERONSKY/THE ROCKEFELLER UNIVERSITY

Gregory Alushin created flexible arrangements with his lab members after his departure.

any plan for any other kind of money.”

To pay her bills, she picked up a part-time job and a teaching position outside her department. Another PI took her on as a student and covered part of her salary, but that funding stream has dried up, leaving her unsure of how to support herself financially for the remainder of her programme – estimated to be another five months.

Another challenge is a lack of support, which can delay research progress and negatively impact career prospects. A planetary-geology PhD student at a US institution faced setbacks when her adviser left for a job on the other side of the country in 2019. While her PI was moving and establishing a laboratory, pub-

“Stay focused on your end goal. It’s easy to get lost in the drama of it, but you just need to finish and move on.”

lication deadlines were pushed back. “That’s been really frustrating,” she says, noting that she waited for months to receive feedback on several manuscripts. “I want to apply for postdocs, but I don’t have a publication list to show for myself because everything is about to be submitted or just got submitted. I feel like it could have been submitted two years ago.”

Polk encourages junior researchers to be assertive about their professional needs – but acknowledges that it shouldn’t be their responsibility to do so. “They can’t unilaterally make an adviser comply with their wishes, but they can certainly send reminder e-mails,” she says, adding that feeling insecure about a publication record shouldn’t deter people

from applying for jobs. “Hiring is never just about candidate A having more publications than candidate B.”

Personalized paths

Some PI departures can have more positive outcomes depending on the PI’s new position, their relationship with their advisee and the advisee’s personal and professional goals.

“Don’t think one option is going to be detrimental to your career over another,” says Pinar Gurel, a senior scientist at the pharmaceutical company Alkermes, who is based in Cambridge, Massachusetts. Gurel earned her PhD in biochemistry at Dartmouth College in Hanover, New Hampshire, in 2014, and started a three-year postdoctoral fellowship at the National Institutes of Health (NIH) in Bethesda, Maryland, the following year.

Two years into her postdoc programme, Gurel’s PI, structural biophysicist Gregory Alushin, took an assistant-professor position at The Rockefeller University in New York City. Before deciding to leave, he told his lab members about his job search and explained why he was looking for a new position. “It’s always a good policy to have clear communication with your staff as early as you can without jeopardizing the process,” says Alushin.

After he accepted the position at Rockefeller, he gave his students an opportunity to tour the campus and to interact with other researchers in the department at an annual retreat. “That was a nice chance for them to get introduced to the community,” says Alushin.

Open discussions with her adviser about what the move to New York would entail and why it was a good opportunity in terms of his research programme helped Gurel to understand why Alushin made the decision to leave

and informed her plans moving forwards. Ultimately, Gurel and Alushin worked out a hybrid arrangement in which she could split her time between the NIH and Rockefeller. “I would take an early Monday morning train, go straight to work with my suitcase, and then I would spend a week with my friends or brother-in-law,” she says. Towards the end of her postdoc programme, she was spending almost all her time in New York City because it was logistically easier to work there with her PI. Alushin even offered to cover some of her bus and train tickets for the 770-kilometre round trip.

Gurel says the compromise worked for her, but was achievable only because she and Alushin were clear and honest with each other, adding: “Open communication and laying out the options are important, especially for a younger trainee because they’re new to the field. They may not know the full scope of what’s possible.”

Alushin had hoped that his lab members would move with him, but he was open to finding more flexible arrangements. “They’re going to make decisions based on their own needs and priorities that may not always match your needs and priorities, but we try to find as much common ground as we can,” he says. “You want to keep your research programme going, but also minimize the suffering of those that you work with.”

Moving forwards

PhD students and postdocs faced with a departing supervisor can take steps to strengthen their support networks and overcome feeling stuck, says Polk. “I would advise students in this situation to recognize that they have power over their own career and educational choices. As much as this might be a stressful situation, times of disruption can be important moments for reflection and adjustment.” Polk suggests that they focus on



Associate dean Theresa Rogers.

personal values and goals and consider the types of environment they thrive in, which can help to inspire them to pursue the resources they need to move forward.

For instance, the planetary-geology student devised a creative solution to continue her research project when she lost access to lab equipment during her PI’s move. She reached out to her undergraduate institution, which had a machine that she could use to do research. The institution was thrilled to have her use the machine and offered her an affordable rate. Her PI paid the fees using grant funding that was allotted for the student’s research. “By working more independently at my undergrad institution, I gained increased knowledge of my samples and the methods I used, as well as confidence in my data analysis and how I communicate my results,” she says. “The biggest piece of advice that I could give is to just stay focused on your end goal. It’s really easy to get lost in the drama of it ... but at the end of the day, you just need to finish and move on with your life.”

“Students are reluctant to rock the boat,” says Theresa Rogers, associate dean of graduate and postdoctoral studies at the University of British Columbia in Vancouver, Canada, noting the inherent power PIs have over their students. But sometimes students need to advocate for themselves to ensure they’re getting the help and support they need to complete their degrees, she says.

Rogers helps students to navigate challenging relationships with their PIs by reminding them that their department and university have a responsibility to see them through their programmes. She recommends that all students review a communication checklist with their PIs to establish expectations (see ‘Laying down the ground rules’) and advises them on how to navigate difficult conversations. If needed, Rogers steps in to help students to develop solutions with their current PIs or, in rare cases, find them new advisers at the university.

Rogers encourages students to find mentors and support systems in and outside the university. “The minute you enter a programme, find a community of students and faculty so you feel like you’re part of a community and not just tied to this one person,” she says. For instance, committee members, faculty members outside the department or university and other graduate students can serve as a support system when situations get tough. “Once you find yourself in that position, go to someone you trust – whether it’s another committee member or whoever’s assigned to look over grad work.”

Having a strong support network is crucial not only to help early-career researchers navigate their path forwards when their PIs leave unexpectedly, but also to address broader challenges regarding mentorship of

Laying down the ground rules

A communications checklist can help to navigate difficult situations, says Theresa Rogers, associate dean at the University of British Columbia in Vancouver, Canada. The checklist might include:

As your supervisor, you can expect me to:

- Demonstrate commitment to your research and educational programme, and offer stimulation, respectful support, constructive criticism and consistent encouragement.
- Assist with the identification of a suitable research topic for you that is manageable within the scope of your degree.
- Have sufficient familiarity with your field to provide guidance as a supervisor.
- Provide guidance in the ethical conduct of research and model research integrity.
- If a situation arises in which I have to leave the university, you can expect me to openly communicate with you about the process and potential outcomes.

Early-career researchers can ask:

- How often will we meet and what will we discuss?
- How long can I expect to wait for feedback when I turn in a draft?
- How will I be funded, and for how many years of my PhD or postdoc?
- Are more funding options available?
- How will you maintain a respectful environment?
- How will you support my career goals?
- How is co-authorship handled for collaborative research projects?
- If there are cultural barriers, how will you help me to address them?
- If you change institutions, retire or go on leave, what is the process for finding an alternative supervisor?

PhD students and postdoctoral researchers in academia. “The devaluation of teaching and mentorship within academic structures is a broad, systemic problem that needs to be handled as a full community,” says the geosciences student. “No one was ever cruel or mean, they were just negligent. They never decided to sit down and try to figure it out, even though I said time after time that I’m having a terrible time and I need help. They never said to themselves ‘maybe it is my responsibility to try to help with that.’”

Nikki Forrester is a science journalist based in West Virginia.