

Closing Gaps in Our Knowledge of PhD Career Pathways: Job Changes of PhD Graduates After Earning Their Degree

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Relatively little is known about the job transitions PhD degree holders experience at various stages of their careers. Using data from the Council of Graduate Schools' **Understanding PhD Career Pathways for Program Improvement** project, this brief looks into current and immediate prior jobs of PhD degree holders who earned their doctorates three years (Cohort A), eight years (Cohort B), and fifteen years (Cohort C) ago. We examined the nature of job transitions that occurred within the last three years.

Key Findings:

- Unsurprisingly, most respondents in Cohort A experienced job changes within the last three years. In every broad field of study except Education, over 90% of PhD alumni indicated that they switched to their current jobs within the last three years. In Education, only 80% in Cohort A indicated that they switched to their current jobs within the last three years, likely because some of them have already been employed in relevant jobs while pursuing a doctorate. **(Figure 1)**
- In contrast, fewer alumni in Cohorts B and C experienced recent job changes. In every broad field but the Life & Health Sciences, approximately one-third of Cohort C reported that they started their current jobs within the last three years. Relative to other broad fields, the Life & Health Sciences saw higher rates of recent job changes in all three cohorts. **(Figure 1)**
- Most job changes occur within the same sectors; however, some PhD graduates move between sectors of employment. In STEM fields, most inter-sector job changes occur in the first three years post-graduation. For example, 32% of Life & Health Sciences PhDs, 27% of Physical & Earth Sciences PhDs, and 22% of Engineering, Mathematics & Computer Sciences PhDs in Cohort A moved between business/government/non-profit (BGN) sectors and the academy within the last three years. In Arts & Humanities, the movement between BGN sectors and the academy happened rather consistently across different cohorts, ranging between 17-19%. **(Figure 2)**
- In the majority of cases, these movements are from the academy to BGN sectors, except for the PhDs in Education (all cohorts) and Cohort C for PhDs in Physical & Earth Sciences and Engineering, Mathematics, & Computer Sciences. The most BGN-to-academy transitions occurred for PhDs in Education. **(Figure 2)**
- Although most recent movements from BGN sectors to the academy occur in Cohort A, the majority of those in both Cohorts A and B moved into faculty positions. In contrast, among those who made a change, those in Cohort C were slightly more likely to move into administration positions, rather than faculty jobs. **(Figure 3)**



Figure 1. Share of PhD Holders who Started Their Current Jobs within 3 Years by Cohort and Selected Broad Fields of Study

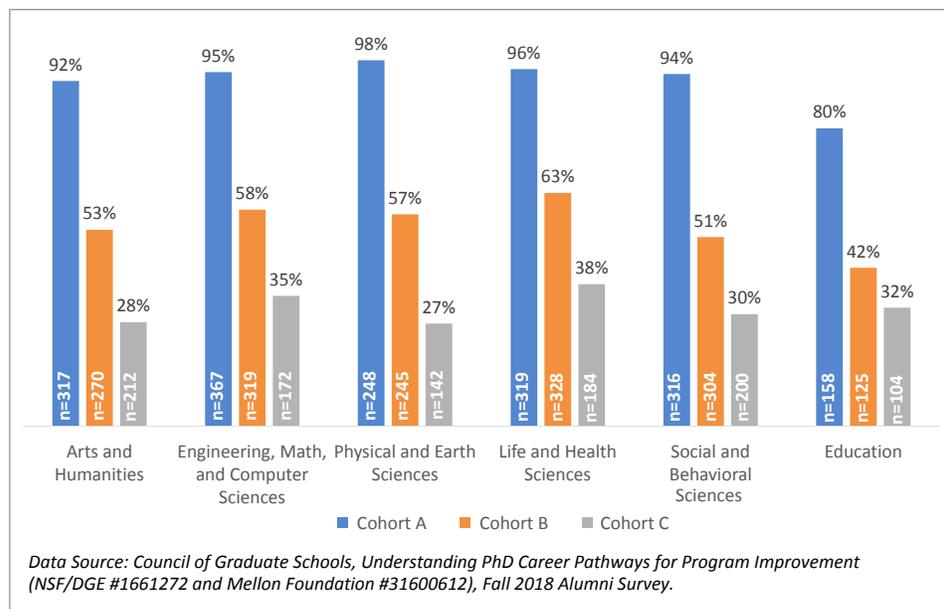
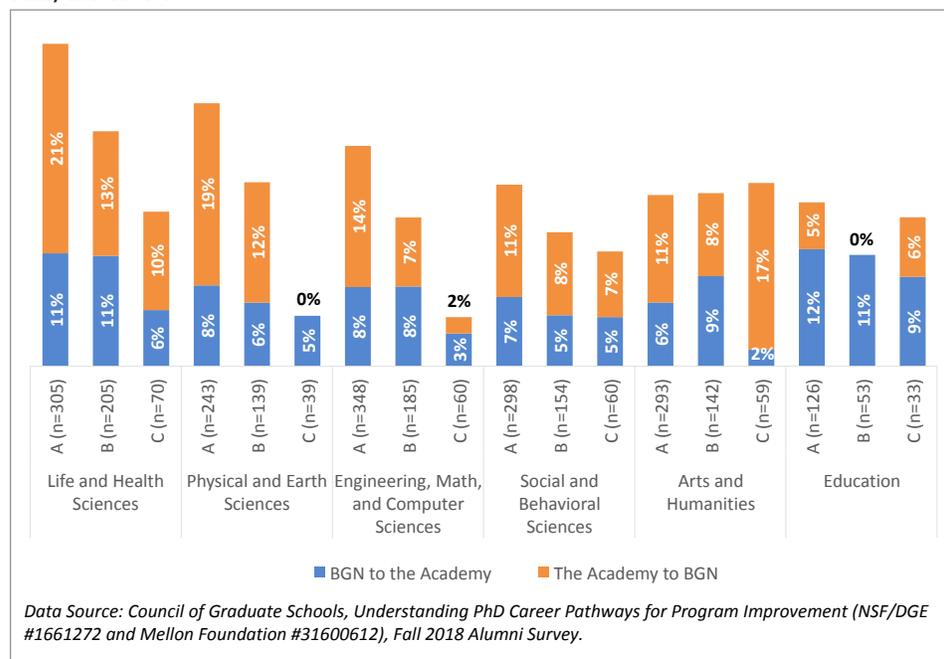


Figure 2. Share of PhD Holders who Moved between the Academy and Business/Government/Non-profit (BGN) Sectors in the Most Recent Changes of Their Jobs by Selected Broad Fields of Study and Cohort

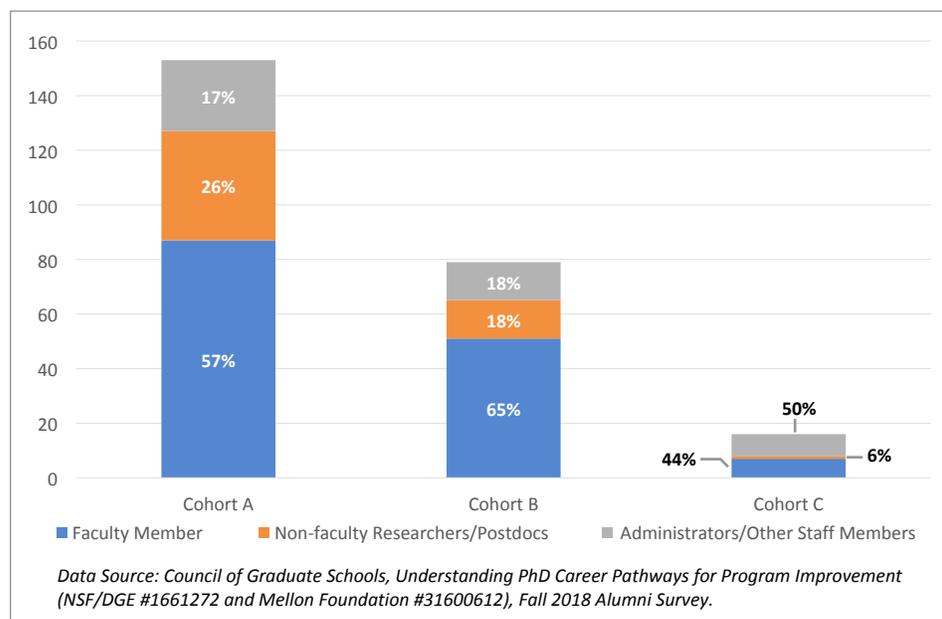


Takeaway Points:

- Many PhD holders experience job changes in their early careers and even into mid-career. This finding may reflect the effects of postdoctoral training opportunities in some fields. However, it also signals that earning a PhD is just the beginning of one's career, and job changes continue throughout the next 15 years in the workforce. In other words, a first job is certainly not the last job. This underscores the importance of preparing PhD students not only for their first job searches but also for preparing them to navigate different job opportunities and careers as a whole.
- Some PhD holders move between academy and BGN sectors as they change jobs. Career pathways of PhD degree holders are not always linear, through a single employment sector. Thus, it is important that PhD programs also help prepare students to navigate job opportunities across different sectors, and to understand how their PhD education might be relevant in different settings.
- Movements between BGN sectors and academia are not unidirectional. There are PhD holders who move from BGN sectors to the academy and faculty positions in the beginning, early, and mid phases of their careers. Once again, this underscores that there is no singular pathway to faculty and administrative positions at colleges and universities, even if this fluidity is more pronounced in some fields than in others.



Figure 3. Share of PhD Holders who Moved from BGN Sectors to the Academy by Cohort and Current Job Types



Conversation Starters for PhD Program Improvement:

We encourage graduate schools to engage in campus conversations about PhD careers to ensure that career diversity is seen and celebrated. Culture change happens incrementally and requires active participation of students, faculty, and administrators. A good first step is understanding how your campus community communicates about career options for PhDs. Some of the questions that you may want to begin asking your campus colleagues (i.e., graduate school staff, college deans, graduate program directors, etc.) and others include:

- What kind of professional development opportunities does your institution provide PhD students to help them imagine and navigate into their second jobs and beyond?
- What kind of resources and guidance does your institution offer to faculty members and advisors, so that they talk to their students about a range of job opportunities and career pathways for PhD holders?
- How does your institution's Preparing Future Faculty (or similar) program address and help PhD students consider multiple pathways into the professoriate?
- What pathways are there at your university for PhD holders with experience outside of the academy to contribute to the university enterprise in their early and mid career stages and beyond?

About the Data Source and Method:

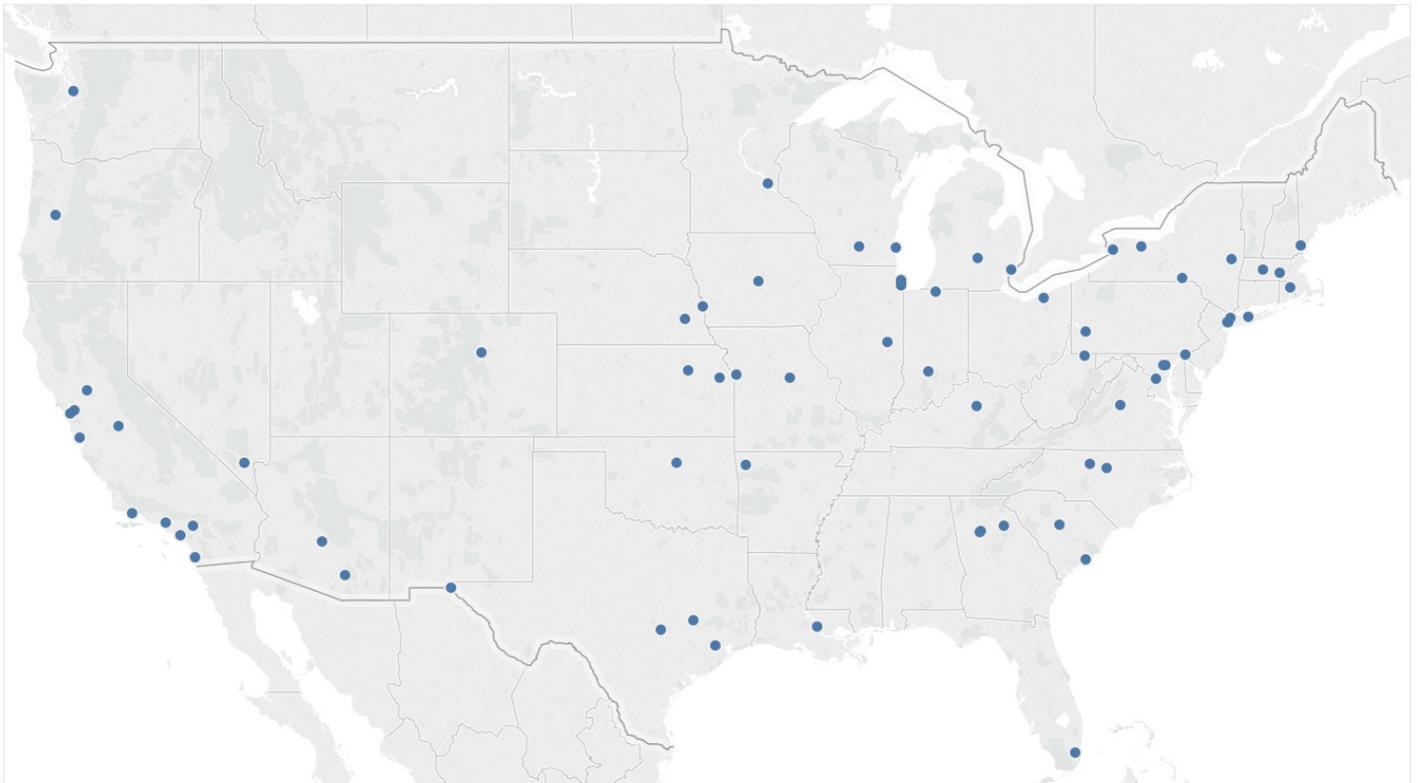
The CGS PhD Career Pathways Project Fall 2018 Alumni Survey was distributed to doctoral degree recipients that were three, eight, or fifteen years out of their PhD in selected programs at 51 participating institutions. Each of the universities administered the survey individually and shared the resulting data with CGS. This brief is based upon 4,766 doctoral degree recipients who responded to the survey and reported their doctoral fields of study, current jobs, and immediate prior jobs. For the purpose of this brief, "jobs in the academy" includes those who worked in one of five postsecondary sectors (Research University, Master's/Regional University, Liberal Arts College, Community or Two-Year College, and College or University System). Cohort A earned their doctorates between July 1, 2014 and June 30, 2015 (three-years out). Cohort B earned their doctorates between July 1, 2009 and June 30, 2010 (eight-years out). Cohort C earned their doctorates July 1, 2002 and June 30, 2003 (fifteen years out). In order to understand which of these cohorts were most likely to experience recent job changes, only job changes within the last three years were analyzed.

The CGS PhD Career Pathways Coalition

CGS PhD Career Pathways is a coalition of 70 doctoral institutions working to better understand and support PhD careers across all broad fields of study. Over the course of the project, universities will continue collecting data from current PhD students and alumni using surveys that were developed by CGS in consultation with senior university leaders, funding agencies, disciplinary societies, researchers, and PhD students and alumni. The resulting data will allow universities to analyze PhD career preferences and outcomes at the program level and help faculty and university leaders strengthen career services, professional development opportunities, and mentoring.

About CGS

For over 50 years, the Council of Graduate Schools has been the only national organization dedicated solely to advancing master's and doctoral education and research. CGS members award 86.9% of all U.S. doctoral degrees and 59.8% of all U.S. master's degrees. CGS accomplishes its mission through advocacy, the development and dissemination of best practices, and innovative research.



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