

# Introduction

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Today, women receive slightly more than half the doctoral degrees granted in the United States.<sup>1</sup> With women and men now feeding the academic pipeline in equal numbers, is it just a matter of time before we see gender parity in the professoriate? Regrettably, the answer is no. In two important measures of gender equality, the representation of women in academe and the family characteristics of women who do become professors, we see a serious imbalance. Put simply, there are far fewer women than men at the top of the academic ladder, and these women are much less likely to be married or have children than are the men at the top. In contrast, at the bottom of the academic ladder, among the ranks of contingent and part-time faculty, there are disproportionately more women, and these women are almost as likely as the men to have children. Mothers are more likely to sink to the second tier of academia or leave higher education altogether.

This book draws on over a decade of research to offer the first broad examination of the effects of family formation on the academic careers of men and women across their professional lives.<sup>2</sup> The story begins with graduate students and postdocs; moves to the critical assistant professor years, when careers advance or founder; continues with the midcareer years, in which some academics take on leadership roles, while others experience professional stagnation; and finally, looks at retirement. It is important to note that this story is not just about women. Although family formation plays a more dramatic role in women's academic careers, it does affect the choices that men make and how they manage to balance career and family. In particular, the status of fathers as equal caretakers is seriously challenged by many of the same professional obstacles that hold back mothers. Our research on the lives and careers of

and female academics, built on a multitude of rich data sets, describes these challenges at length.

The "Do Babies Matter?" research project began at the University of California, Berkeley, in 2001. The previous year had been a milestone for graduate education at Berkeley: for the first time more than 50 percent of the incoming class were women. This landmark event reflected the national trend; the percentage of women among U.S. citizens receiving doctorates in the United States rose from 12 percent in 1966 to 49 percent in 2000 (today it stands at 51 percent).<sup>3</sup> Still, in 2000 women composed only 23 percent of tenure-track faculty (pre- and post-tenure) at Berkeley, and in higher administrative posts they were scarcely visible. This was not simply a chronological lag. In 2000, women received 39 percent of all doctorates granted at Berkeley, but they represented only 28 percent of the new faculty hires. This disparity between the gender breakdown of the available pool and of hired faculty has been the norm for decades at American universities. The numbers may have changed somewhat, but the pattern has not: the gap between women's Ph.D. receipt and faculty hiring has only grown at Berkeley and other universities in recent years.<sup>4</sup>

When our Do Babies Matter? project began in 2001, Mary Ann Mason was the first woman dean of the Graduate Division of the University of California, Berkeley, and Marc Goulden served as a senior research analyst. Nick Wolfinger, a family sociologist at the University of Utah, joined the team the next year.

We began to investigate the effect of family formation on the academic careers of both men and women. To address this question we first turned to the Survey of Doctorate Recipients (SDR), a national data set sponsored largely by the National Science Foundation, with contributions from the National Endowment for the Humanities and other agencies. This ongoing biennial longitudinal survey, begun in 1973 and continually replenished with new respondents, tracks more than 160,000 Ph.D.s across the disciplines throughout their careers, until age seventy-six. It is arguably the best employment data set in the United States. Using the SDR we were able to examine the experience of Ph.D. recipients in the sciences, including engineering and mathematics, as well as in the social sciences and humanities.<sup>5</sup> The SDR includes faculty members at liberal arts schools, community colleges, and research universities, as well as Ph.D. recipients working in the private sector or government.

Our initial inquiry, funded by the Association for Institutional Research, produced intriguing results.<sup>6</sup> Women who had children within five years of receiving their Ph.D. were much less likely than men with early babies to acquire tenured professorships. This pattern persisted across the disciplines, from the bench sciences to the humanities, and held across different types of four-year institutions, from liberal arts colleges to major research universities. Moreover, mothers often fell into the second tier of adjunct faculty or instructors

at two-year colleges.<sup>7</sup> Marriage in and of itself and older children had different effects on women's careers, underscoring the complexity of gender equity in the academy. Also, we had not yet identified the stage in the academic life course where mothers dropped out. Do they leave academia right after graduate school, or do they fail to get tenure? Our subsequent research would address these questions.<sup>8</sup>

Concerned by our finding of a strong relationship between family formation and professional success in academia, we turned the question on its head and asked: What is the effect of career on family formation? Do men and women who achieve their goals and become tenured professors have similar family configurations? Here the results were equally alarming.<sup>9</sup> The familial gap between men and women professors was far larger than the career gap: only one in three women who takes a tenure-track university job before having a child ever becomes a mother, and women who obtain tenure are more than twice as likely as their male colleagues to be single twelve years after earning their Ph.D. Women are also much more likely to be divorced than men in similar career circumstances.

This analysis suggested that a full consideration of gender equity in the academy needed to be measured in two ways.<sup>10</sup> Comparing the number of tenured men professors with the number of tenured women professors only told part of the story; equally important were the family configurations of those who had obtained tenure. True parity could only be achieved when men and women realized the same professional *and* familial goals.

Our research led to another surprising finding. Using the 2000 United States Census we compared the frequency of childbirth for academic women and men with workers in two other time-demanding, fast-track professions, law and medicine.<sup>11</sup> Not only did academic women have fewer children than did women doctors and lawyers, but academic men experienced a similar gap. Compared with other fast-track professions, the academy is less family friendly for both men and women.

Our Do Babies Matter? findings offered compelling evidence of a phenomenon that had previously been noted only anecdotally. Universities could no longer ignore the problem. They were losing some of their best and brightest students, and those who stayed in the academy often did so at a familial disadvantage. Attracted by our work, the Alfred P. Sloan Foundation, long involved with work and family issues, sponsored us to promote real change in academia. We developed the UC Faculty Family Friendly Edge (<http://ucfamilyedge.berkeley.edu/>) project as a vehicle to implement reform at the entire ten-campus UC system.

Our first step was a baseline survey of the more than eight thousand tenure-track faculty members in the nine-campus University of California system (a

tenth campus, UC Merced, was added in 2005). We wanted to know what their work and family lives were like. What were their greatest challenges? What did they perceive to be the best solutions? Ironically, the UC system had been an early pioneer in offering family-friendly policies in the late 1980s, but our findings showed that more than half the faculty did not know many of these policies existed. Of those that did know, too few used them. Clearly, just creating new policies would not change the culture.

The political work of enhancing the existing family accommodation policies at the huge UC system has taken many years and remains ongoing. Administrators from top to bottom had to be convinced that developing strong policies was important for the future of the UC system. The university spent months working out the thorny details, such as how to evaluate research productivity for faculty who had stopped the clock for tenure. Furthermore, the department chairs, the on-site managers of the faculty, had to be trained in the new policies.

Ultimately, our faculty family-friendly package included innovative policies for both mothers and fathers. We aspired to create a new climate in which families were integrated into all stages of men's and women's academic careers. It was clear that culture change would not occur unless men were equally invested. Several of the reforms focused on the early faculty years, for both men and women the time of greatest demands both professionally and at home. These years, which we call the "make or break" period, occur roughly between the ages of thirty and forty and are when most academics get tenure-track jobs and many receive tenure. These are also the years when most babies are born. We promoted a pre- and post-tenure part-time track for both mothers and fathers with the right to return to full-time work. We advocated for options to stop the tenure clock and provide relief from teaching for one semester for fathers and two semesters for mothers. The part-time tenure-track also offered a more flexible way of managing work and family over the course of a career, including the midcareer years when elder care—for parents and, later on, for spouses or partners—can become time consuming. Recognizing that department chairs were often the most critical link in encouraging or discouraging personnel policy, we developed a set of guidelines for academic administrators, "Creating a Family-Friendly Department: Chairs and Deans Toolkit," which provided specific instructions on how administrators should handle family matters and improve family friendliness across their institutions.<sup>12</sup>

Our research did not stop with the implementation of these family-friendly policies. Over time we learned that many women (and some men) had already made up their minds in graduate school to abandon an academic career. Others made the decision while they were postdoctoral fellows. To discover why men and women doctoral students were turning away from academic research careers and heading instead to four-year teaching colleges or jobs in industry

and government, we surveyed students in their second year or beyond at nine of the ten campuses in the UC system (UC Merced had too few graduate students to participate). We learned that many of our young graduate students become disenchanted with academia during the course of their studies, as they become aware of the challenges of balancing family with a career in the professoriate.<sup>13</sup>

To address these concerns we proposed a new set of family-friendly policies for graduate students in order to change the culture for them as well. The message we sought to convey through these policies is that it is possible to pursue an academic career and still maintain balanced family and personal lives. We wanted students to feel that families are welcome at any time, including in graduate school. The new policies included paid maternity leave for graduate students, help with child care, and a stop-the-clock option so that men and women doctoral students who became parents could take a year longer to complete their degree without being penalized.

Initially our research had focused on the early years, when careers are made or broken and family formation has the most dramatic consequences. We extended our inquiry to the midcareer years and investigated the rank and salary lag for women. Women are more likely to remain as associate professors than are men. Women professors make less money than their male colleagues. Furthermore, women are not ascending to the major academic leadership roles—deans, provosts, presidents—commensurate with their numbers.

We learned that the story regarding family formation in the midcareer years is both more hopeful and more complex than it is in the make-or-break years. The effect of family on midcareer advancement is smaller but still noteworthy. Children don't affect promotion to the rank of full professor, but they do reduce women's salaries. Taken together our findings show that marriage and children affect men and women in different ways at different stages in the academic life course.

A different kind of family issue becomes imperative for many women and men in the mature heart of their careers, around age fifty, as parents become dependents and husbands and wives must care for each other in times of failing health.<sup>14</sup> Although the average time requirements of later-life caregiving are less predictable than during family formation, they nevertheless affect many academics. As is the case in the make-or-break years, it is women who often bear the lion's share of the burden. Our research looks at family and career in these later years and explores when and why professors retire and what role family plays in that decision.

More recently our research has focused on the scientific disciplines, including the physical and biological sciences, mathematics, and engineering. These disciplines present unique challenges for work-family balance, especially for women. In the physical sciences, the low enrollment of female graduate

students and the paucity of tenured female scientists perpetuate a culture that is decidedly unfriendly toward women. In the biological sciences, women are thriving at the graduate school level, yet they face huge obstacles in sustaining their postgraduate careers with the support of funding from federal agencies. In many cases, the family demands experienced (or anticipated) by young women scientists are a key reason for their failure to continue.

We also discovered that federal granting agencies may contribute to this problem by making few allowances for family needs. We surveyed the thirteen major federal agencies that support scientific research to identify their family-friendly policies and practices.<sup>15</sup> This was followed up with a survey of the Association of American Universities schools—the top sixty-one research universities and where most scientific research takes place—to determine the extent of their family-friendly policies for graduate students, postdocs, and faculty. But the problem isn't limited to research universities. At the numerous conferences where we have shared our findings, we have learned that the need for family-friendly policies is similar across all types of higher education institutions, including liberal arts colleges and junior colleges.

Equipped with these many strands of research, we present a comprehensive picture of how career and family intersect over the course of an academic career. We can pinpoint the key junctures where families derail careers. The story is complex; family formation can also have professional benefits for both men and women. For men, marriage and children appear to have a positive effect at most career stages. For women, marriage and older children have benefits at certain stages. Although there are clearly nuances to this story, overall we see large discrepancies between men and women faculty regarding marriage and children—a finding that cannot be ignored. With this knowledge we can begin to understand what interventions are necessary at different stages of an academic career to allow academics, male and female, to live balanced lives.

The following chapters describe the relationship between gender, work, and family at each stage of the academic career path: the graduate student years, looking for the first job, the probationary pre-tenure years, midcareer, and retirement. Specific strategies and interventions are outlined for achieving work-family balance at each career stage; many of these interventions are already best practices at some universities and federal agencies. Broader issues, such as the future of tenure and the reach of Title IX in restructuring the academic workplace, are addressed. The frustration of fathers in their emerging role as equal caretakers and the regrets of tenured women without children are carefully examined. As often as possible, we present the voices of the men and women who are living the challenge of balancing work and family. These voices emanate from comments in the many surveys we have undertaken over the years; from online accounts such as in blogs; and from the interviews we

have conducted, some of them in conjunction with Mary Ann Mason and Eve Ekman's book, *Mothers on the Fast Track*.<sup>16</sup>

This is a turning point for universities. Many of our best and brightest young people are rejecting careers at research universities. According to our research, the lack of accommodations for family obligations is a key reason the new generation of scholars views an academic career as unappealing. This is costly in many ways. The United States cannot afford to lose many of its best researchers and thinkers, scholars who will eventually train the next generation. And these talented young scholars should not have to forsake careers for which they have already invested many years of their lives.

We are arguing for a new model for the academic workplace that's more in line with the actual experience of men and women scholars. This model must take into account that many couples have dual careers, and that children, spouses, and parents are an integral part of most scholars' lives. This dramatic shift is needed to attract and retain the women who are now nearly the majority of Ph.D. recipients, but who are often not able to achieve their full career potential and still have a family. Change is also needed for men, who are committed to active family participation but feel thwarted by career pressures.

Spurred in part by our research and the progressive model now in place at the University of California system, family-friendly policies are getting serious national attention. Giant steps towards family friendliness have been taken at many colleges and universities. At the University of California we have seen tremendous shifts in the past few years, since we developed the UC Family Friendly Edge program. Women assistant professors are more than twice as likely to have children as they were in 2003. Faculty are making use of accommodations for childbirth at an unprecedented rate, and graduate students are routinely stopping the clock and taking paid maternity leave. Many other universities and colleges have important success stories to tell. Long the epitome of workplace inflexibility, academia is gradually becoming a benchmark for progress. The following chapters will show why this transformation is needed, and how it might be implemented.