

The Ph.D. Rises in American Law Schools, 1960-2011: What Does It Mean for Legal Education?

Justin McCrary, Joy Milligan, and James Phillips

Introduction

Legal academia is in existential crisis, or so it's been argued in books, blogs, and *The New York Times*.¹ To the degree the concerns arise from very high tuition costs and too many lawyers relative to demand,² market processes may correct the underlying problems.³ Nonetheless, the contraction has triggered a deeper

Justin McCrary is a Professor of Law at University of California, Berkeley; the Director of the Social Sciences Data Laboratory (D-Lab), UC Berkeley; and a Faculty Research Associate with The National Bureau of Economic Research. The authors thank Catherine Albiston, Emily Bruce, Lauren Edelman, Kristen Holmquist, Anne Joseph O'Connell, and Bertrall Ross for their extremely helpful comments, and Andrew Chang, Byron Chiu, Radhika Kannan, Donna Kim, Katherine Li, Livia Maas, and Kyle See for their excellent research assistance. Listed order of authorship is alphabetical.

Joy Milligan is a Ph.D. candidate in Jurisprudence & Social Policy at University of California, Berkeley.

James Phillips is a Ph.D. candidate in Jurisprudence & Social Policy at University of California, Berkeley.

1. For descriptions of the "crisis," see, e.g., BRIAN Z. TAMANAHA, *FAILING LAW SCHOOLS* (2012); *The Law School Debt Crisis*, N.Y. TIMES, Oct. 25, 2015, at SR8; Lincoln Caplan, *An Existential Crisis for Law Schools*, N.Y. TIMES, July 15, 2012, at SR10; William D. Henderson & Rachel M. Zahorsky, *The Law School Bubble*, AM. BAR ASS'N J., Jan. 2012, at 30; Eric Posner, *The Real Problem with Law Schools*, SLATE, (Apr. 2, 2013), http://www.slate.com/articles/news_and_politics/view_from_chicago/2013/04/the_real_problem_with_law_schools_too_many_lawyers.html.
2. See Deborah Jones Merritt, *The Job Gap, The Money Gap, and the Responsibility of Legal Educators*, 41 WASH. U. J.L. & POL'Y 1, 2 (2013) (noting the "job gap" between number of law graduates and number of available jobs, and the "money gap" between increase in tuition and decline in starting salaries).
3. On these trends, see, e.g., Karen Sloan, *Ohio Becomes Bargaining State for Legal Education*, NAT'L L. J., Feb. 12, 2014; Jennifer Smith, *First-Year Law School Enrollment At 1977 Levels*, WALL ST. J. (Dec. 17, 2013), <http://blogs.wsj.com/law/2013/12/17/first-year-law-school-enrollment-at-1977-levels>; Ethan Bronner, *Law Schools' Applications Fall as Costs Rise and Jobs Are Cut*, N.Y. TIMES, Jan. 31, 2013, at A1. Justice Antonin Scalia in a 2014 commencement address said, "[T]he vast majority of law schools will have to lower tuition. That probably means smaller law-school faculties That would be no huge disaster." Hon. Antonin Scalia, Assoc. J., U.S. Sup. Ct., 2014 William & Mary Law Sch. Commencement Exercises, *Reflections on the Future of the Legal Academy* (May 11, 2014), <http://law.wm.edu/news/stories/2014/documents-2014/2014WMCCommencementSpeech.pdf>.

debate about the goals of legal education. Some argue that law schools should return to the core mission of training lawyers for practice.⁴ Others believe that law schools should instead prioritize academic scholarship, and do so at least in part by adopting the methods of the social sciences and other disciplines.⁵ To some, this debate symbolizes a fundamental choice that law schools must make concerning their future path: Focus on real-world practice or the pursuit of scholarly knowledge? Many others point out that it is unnecessary to make such a stark choice, given that the goals can coexist (and have for many decades, despite recurring episodes of conflict over and perceived crisis in legal education).⁶

The debate over law schools' futures has been accompanied by what appears to be a significant long-term trend. Anecdotal reports and past studies suggest that law schools are hiring more and more Ph.D.s into tenure-track positions. Such a trend might itself shape the future of legal education. If law faculties increasingly include scholars trained in academic disciplines outside law, law schools' priorities in subsequent hiring, as well as curricular and other institutional choices, may shift simply as a result of the changing composition of faculty.⁷ If faculties tend to reproduce themselves over time, past trends might

4. E.g., John Lande, *Reforming Legal Education to Prepare Law Students Optimally for Real-World Practice*, 2013 J. DISP. RESOL. 1, 1; Bronner, *supra* note 3, at A1 (citing USC professor's suggestion that "big corporations [are] dissatisfied with what they see as the overly academic training at elite law schools."); David Segal, *What They Don't Teach Law Students: Lawyering*, N.Y. TIMES, Nov. 20, 2011, at A1; see also WILLIAM M. SULLIVAN ET AL., THE CARNEGIE FOUND. FOR THE ADVANCEMENT OF TEACHING, EDUCATING LAWYERS: PREPARATION FOR THE PROFESSION OF LAW (2007) (suggesting that law schools should integrate more practical and ethical training into their curricula, alongside legal analytic training).
5. Proponents of these views have been less vocal in recent debates. *But cf.* Christopher Edley, Jr., *Fiat Flux: Evolving Purposes and Ideals of the Great American Public Law School*, 100 CALIF. L. REV. 313, 315, 318 (2012) (noting trend toward cross-pollination with other disciplines and suggesting that the modern law school has been "enriched by diverse, Ph.D.-trained faculty"); see also David Van Zandt, *Discipline-Based Faculty*, 53 J. LEGAL EDUC. 332, 335 (2003) (in an earlier era, arguing in favor of hiring "academics with a strong disciplinary training in one of the social sciences . . . who are also well-trained lawyers.>").
6. See A. Benjamin Spencer, *The Law School Critique in Historical Perspective*, 69 WASH. & LEE L. REV. 1949, 1956-58 (2012) (suggesting that the critique that law schools are not sufficiently practice-oriented has been heard for the past 130 years and noting that both missions can coexist); see also Kristen Holmquist, *Challenging Carnegie*, 61 J. LEGAL EDUC. 353, 354 (2012) ("In 1933, Jerome Frank famously called for transforming 'law schools' into 'lawyer schools.'").
7. Presumably those with Ph.D.-level training are likely to prioritize the production of academic research, and they are less likely to have significant practice experience. See Lynn M. LoPucki, *Dawn of the Discipline-Based Law Faculty*, 65 J. LEGAL EDUC. 506, 508, 531 (Table 13) (2016) (reporting substantial disparities in practice experience between law professors recently hired with J.D.s and those hired with J.D.-Ph.D.s). Also, since current faculty control the future composition of legal academia, they may favor those with credentials similar to their own, rendering the process endogenous. See Michael Adler & Jonathan Simon, *Stepwise Progression: The Past, Present, and Possible Future of Empirical Research on Law in the United States and the United Kingdom*, 41 J.L. & SOC'Y 173, 195 (2014); Tracey E. George & Albert H. Yoon, *The Labor Market for New Law Professors*, 11 J. EMPIRICAL LEGAL STUD. 1, 14, 36-38 (2014). See also Richard E. Redding, *Where Did You Go to Law School-Gatekeeping for Professoriate and Its*

continue and be reinforced through sheer inertia.⁸ No matter what one believes about the relationship between disciplinary scholarship and practical legal knowledge, it thus seems inevitable that a sharply increasing representation of Ph.D.s among law faculty will markedly influence legal education.

Has the proportion of Ph.D.s among law professors indeed risen significantly? And if so, what does the rise mean for legal education? In this brief empirical article, we examine the evolving proportion of Ph.D.s among top-tier law faculties and probe the potential implications. Using an original dataset on the top thirty-four law schools' faculties from the 2011-12 school year, we investigate changes over time by treating the current faculty as a set of cohorts by hiring year.⁹ Our goals are modest: to provide descriptive data on the nature of the shift toward Ph.D.s, and to suggest questions that those wrestling with the shift's implications and law schools' future course may wish to consider.

We find that the proportion of Ph.D.s has indeed climbed, at least among the highly-ranked schools that make up our sample. In those schools, the fraction of hiring cohorts with a Ph.D. rose markedly and very steadily over time, reaching nearly forty percent of the hiring cohort in recent years.¹⁰

Implications for Legal Education, 53 J. LEGAL EDUC. 594, 610 (2003) (“[L]aw faculties may simply prefer to hire people who are like themselves, a phenomenon that social psychologists have well documented in other contexts.”). Of course, it is possible that other, countervailing trends might balance out any such shift—for example, if law schools simultaneously move toward experiential education by hiring increased numbers of clinical faculty. There are signs of such a trend; California’s state bar association, for example, recently proposed that bar applicants acquire fifteen hours of experiential training during law school. See Karen Sloan, *California’s Practical-Skills Plan Alarms Out-of-State Deans*, NAT’L L.J., July 8, 2015.

8. There is circumstantial evidence that faculties do so, at least to the extent that those hired resemble current faculties in their credentials; see, e.g., *supra* note 7 and *infra* notes 24, 34-37 and accompanying text. Yet the fact that J.D.-trained law faculties have hired Ph.D.s in significant numbers shows that this is not always the case.
9. By cohorts we mean all faculty members grouped by the year they were first hired into law teaching, which allows us to view trends in faculty composition over time. By “top thirty-four” we mean the highest-ranking thirty-four law schools in the 2011 *U.S. News & World Report (USNWR)* rankings. We selected those ranked one to thirty; a five-way tie for thirtieth meant that we had thirty-four schools in total. Our use of the *USNWR* rankings is for convenience and is not intended as an endorsement, as the rankings arguably distort law schools’ incentives in harmful ways. See, e.g., TAMANAHA, *supra* note 1, at 85; cf. Olufunmilayo B. Arewa, Andrew P. Morriss, & William D. Henderson, *Enduring Hierarchies in American Legal Education*, 89 IND. L.J. 941, 1005-09 (2014) (arguing that the *USNWR* rankings have not changed the pre-existing law school hierarchy but that they have reshaped law schools’ internal operations). The faculty members included in our dataset were based on each law school’s website listing of current faculty for the 2011-12 academic year. We used faculty data from that year because it was the most recent year available when we began collecting data. Given our method of disaggregating the data into past hiring cohorts, use of earlier or later years should not, however, produce dramatically different results regarding long-term trends. For further details, see the Methodological Appendix, *infra*.

10. See *infra* Figure 1.

Thus, the trend toward Ph.D. hiring at these schools is real and of significant magnitude.

But the trend has not been uniform. Some disciplines have increased their relative shares among law faculties, and some schools have engaged in more Ph.D. hiring than others. Economics, political science, history, and philosophy are the most heavily represented disciplines, in that order. Ph.D.s in law,¹¹ psychology, interdisciplinary law, and sociology represent the next most prevalent categories. Over the period we studied, philosophy lost ground, and political science gained ground. Interdisciplinary law Ph.D.s and other fields have climbed significantly, increasing the diversity of fields represented overall. The proportion of Ph.D.s within each faculty generally rises with USNWR school rank, suggesting that the most elite schools are driving the Ph.D. trend. Certain schools stand out, even against that pattern: Yale, Chicago, Penn, Berkeley, Northwestern, Cornell, Vanderbilt, USC, Illinois, and Emory all had notably higher proportions of Ph.D.s than their similarly ranked peers.

What else has changed as a result of the shift toward Ph.D. hiring? We asked whether Ph.D.s are replacing “traditional” hiring criteria, but the proportion of new faculty with Supreme Court clerkships and law review membership was relatively steady over time. In fact, the concentration of Harvard-Yale J.D.s actually seems to be rising, including among the hires with Ph.D.s—perhaps signaling a piling-on of credentials rather than a trade-off between traditional credentials and Ph.D.s. Additionally, the proportion of Ph.D.s is lower among women and self-identified racial minorities at these law schools,¹² though this varies significantly by discipline. Women represent an increasing share of all hiring cohorts and of those with Ph.D.s, reaching nearly fifty percent in recent years. The share of self-identified minorities among all new law professors and in the subset with Ph.D.s has also climbed, but has done so less quickly than the share of women, and with an apparent and troubling drop-off in the most recent years.¹³

What does the increasing shift toward Ph.D.s portend for legal education in the broadest sense? We believe that the shift toward Ph.D.s entails a complex set of benefits and costs for law schools, and that there is the potential for building connections between practical experience and academic research, rather than simply choosing between them. Scholarship benefits from a deep understanding of how the practice of law works, while well-trained lawyers understand not only formal legal rules, but also how such laws function

11. The Ph.D.s in Law that we include are not J.S.D.s, which we classified separately; they primarily consist of foreign Ph.D.s or Ph.D. equivalents.
12. We rely on the American Association of Law Schools (AALS) directories, which allow faculty to self-identify as minorities. For further details, see the Methodological Appendix, *infra*.
13. As we caution throughout, we believe the self-identified minority lists in the AALS directories are underinclusive, so drawing definitive conclusions regarding trends in minority hiring calls for further research.

within and shape the social world. Tapping into other disciplines' knowledge of how law functions by hiring those trained in other fields may help law students, as one scholar describes it, learn to "think[] in deeply contextual and sophisticated ways about how they might—or might not—use the law to help a client solve her problem."¹⁴ Moreover, the more diverse the disciplinary mix within law schools, the more likely that law students will be able to draw on a varied set of tools, perspectives, and knowledge to understand and shape law and policy, and to communicate with professionals across many diverse fields.¹⁵ Under the right circumstances, tremendous synergies can emerge from connecting law to other disciplines.

Of course, these points are far from new; we cannot do justice to the long-running, deeply debated question of the appropriate relationship between law and social science within the legal academy in the limited space of this article.¹⁶ However, history does provide some support to our belief that turning to the disciplines need not represent the total embrace of theory over practical knowledge. From at least the Legal Realists forward, disciplinary perspectives have often been seen as a step toward "practical" knowledge for lawyers rather than one toward abstract theory; social science has offered a means to avoid excessive formalism and to produce better-informed law and policy through empirical research.¹⁷ At the same time, we recognize that trade-offs do arise, particularly in the concrete context of hiring.¹⁸ Our goal thus is to trigger thoughtful conversations regarding the consequences of this sizable shift within legal academia, spurring law schools to consider how to maintain their other commitments and goals amid the turn to the disciplines.

Among the complex costs and benefits that the shift toward law professors with Ph.D.s may entail, we wish to draw special attention to the implications for gender and racial diversity. Women and minorities remain underrepresented in

14. Holmquist, *supra* note 6, at 356.

15. See Edley, *supra* note 5, at 319, 325 (arguing that "the subject and purposes of law are as broad as the affairs of humanity, amenable to consideration using every conceptual tool we have developed to understand human affairs" and that law schools should "avoid 'capture' by one or two disciplines").

16. See generally JOHN HENRY SCHLEGEL, *AMERICAN LEGAL REALISM AND EMPIRICAL SOCIAL SCIENCE* (1995); Adler & Simon, *supra* note 7; Christopher Tomlins, *Framing the Field of Law's Disciplinary Encounters: A Historical Narrative*, 34 L. & SOC'Y REV. 911 (2000).

17. Mark C. Suchman & Elizabeth Mertz, *Toward a New Legal Empiricism: Empirical Legal Studies and New Legal Realism*, 6 ANN. REV. L. & SOC. SCI. 555, 557, 565-66 (2010); Tomlins, *supra* note 16, at 933-40.

18. See, e.g., Lynn M. LoPucki, *Disciplining Legal Scholarship*, 90 TULANE L. REV. 1 (2015) (arguing that the influx of Ph.D.s into law schools is unlikely to increase the quantity and quality of empirical legal scholarship and brings serious trade-offs); see also RAKESH KHURANA, *FROM HIGHER AIMS TO HIRED HANDS: THE SOCIAL TRANSFORMATION OF AMERICAN BUSINESS SCHOOLS AND THE UNFULFILLED PROMISE OF MANAGEMENT AS A PROFESSION* 285-87 (2007) (describing tensions that arose between practical training and the discipline-oriented research priorities of faculty in top business schools in the 1960s, after schools had shifted heavily toward hiring disciplinary Ph.D.s).

many Ph.D. fields, and those hired into law schools with Ph.D.s in recent years appear to represent a less diverse group than those without Ph.D.s. As the law teaching market increasingly demands more credentials, especially ones that require lengthy investments of time and forgone earnings like Ph.D.s, it may become increasingly difficult for those from underrepresented groups to become law professors, especially at the elite schools.

Law schools should take seriously these potential implications for diversity when they define their institutional goals and their hiring criteria. It would be a great shame if law schools' intellectual diversity increased along some dimensions, but the schools simultaneously became less diverse and less inclusive in other respects. Rather than simply seek candidates with the greatest number of formal academic credentials, we believe schools should carefully consider the overall mix of faculty expertise, experiences, and skills that will help their institutions build a well-rounded curriculum for their students, a strong research portfolio, and a vibrant, publicly engaged intellectual community.

In Part I we review earlier studies of law faculty demographics and credentials. In Part II we describe our methods and present our findings about the demographics, credentials, and trend toward increased Ph.D.s among top law faculties. In Part III we disaggregate the Ph.D. trend, examining trends for particular disciplines and schools. In Part IV we consider how the trend may affect legal education. In a brief conclusion we point to questions raised by our findings and directions for future research.

I. Past Studies

Elite law schools now employ a significant number of Ph.D.s. A recent study reported that 27% of the current tenure-track faculty at top schools (one to twenty-six in the USNWR rankings) hold non-law Ph.D.s.¹⁹ In a study appearing concurrently with our own in this issue, Professor Lynn LoPucki reports similar numbers, finding that Ph.D.s made up 24% of tenure-track faculty at top twenty-six schools as of 2010, and 48% of those hired from 2011

19. Joni Hersch & W. Kip Viscusi, *Law and Economics as a Pillar of Legal Education*, 8 REV. L. & ECON. 487, 489, 492 tbl.1C (2012); see also George & Yoon, *supra* note 7, at 21 & tbl.2 (reporting that 12% of applicants to all schools in 2007-08 held Ph.D.s). George & Yoon found that while candidates with social science or STEM Ph.D.s were not advantaged in initial processes or hiring generally, they did stand a better chance of landing at a Tier One law school (*i.e.*, a school ranked one to fifty in the USNWR rankings). George & Yoon, *supra* note 7, at 26, 28, 32, 34. Those with humanities and other non-quantitative Ph.D.s had heightened odds of receiving initial screening interviews but were not advantaged at any other stage. *Id.* at 26. Another author reported a finding that 18.9% of hires at all schools from 2000-09 held Ph.D.s, while 35.5% of those at the top ten USNWR-ranked schools did. Brent E. Newton, *Preaching What They Don't Practice: Why Law Faculties' Preoccupation with Impractical Scholarship and Devaluation of Practical Competencies Obstruct Reform in the Legal Academy*, 62 S. C. L. REV. 105, 132 (2010) (relying on a "representative sample" of schools).

to 2015.²⁰ Among the disciplines, economists are the most heavily represented group, encompassing 7% of all faculty members in those institutions.²¹

Further, law schools have changed in significant ways over the past several decades.²² Past research has reported the shifting demographics of law faculties dating back to the 1970s.²³ Those studies emphasized the consistently dominant share of Harvard-Yale J.D.s among law professors, the increasing share of women and minorities among tenure-track faculty over time, and other shifts in credentials—*e.g.*, away from LL.M. and J.S.D. degrees and toward clerkships.²⁴ However, past studies have not reported much data on Ph.D.s, in part because in the past fewer law professors held doctorates from outside law.²⁵

Those past reports do contain suggestive evidence of a trend toward hiring Ph.D.s. In 1988-89, only 5% of tenure-track faculty among all law schools held

20. See LoPucki, *supra* note 7, at 507, Table 1, 514 Table 3, and accompanying text.
21. Hersch & Viscusi, *supra* note 19, at 489 & tbl.1C.
22. We review only past studies of law faculty demographics, but there is a much larger literature on the history, causes, and broader implications of the rise of disciplines within professional schools generally, and legal education more specifically. For example, sociologist Rakesh Khurana has traced the rise of disciplinary Ph.D.s within business schools in an earlier period, linking it to powerful national foundations' drive to increase the perceived quality of business education. See KHURANA, *supra* note 18, at 246-47, 273-75. Others have similarly examined the ways in which legal education has interacted with the other disciplines, particularly the social sciences; they have characterized law as periodically drawing on other disciplines for knowledge, revising its professional identity while bolstering its claims to authority. See Tomlins, *supra* note 16, at 964-67.
23. See generally Redding, *supra* note 7; Robert J. Borthwick & Jordan R. Schau, *Gatekeepers of the Profession: An Empirical Profile of the Nation's Law Professors*, 25 U. MICH. J.L. REFORM 191 (1991); Donna Fossum, *Law Professors: A Profile of the Teaching Branch of the Legal Profession*, 1980 AM. BAR FOUND. RES. J. 501 (1980). A number of studies have focused on faculty diversity and the hiring of minorities and women. See generally Richard H. Chused, *The Hiring and Retention of Minorities and Women on American Law School Faculties*, 137 U. PA. L. REV. 537 (1988); Herma Hill Kay, *The Future of Women Law Professors*, 77 Iowa L. Rev. 5 (1991); Deborah Jones Merritt & Barbara F. Reskin, *Sex, Race, and Credentials: The Truth About Affirmative Action in Law Faculty Hiring*, 97 COLUM. L. REV. 199 (1997); Deborah J. Merritt & Barbara F. Reskin, *The Double Minority: Empirical Evidence of a Double Standard in Law School Hiring of Minority Women*, 65 S. Cal. L. Rev. 2299 (1992); Richard A. White, *The Gender and Minority Composition of New Law Teachers and AALS Faculty Appointments Register Candidates*, 44 J. LEGAL EDUC. 424 (1994); Alfred C. Yen, *A Statistical Analysis of Asian Americans and the Affirmative Action Hiring of Law School Faculty*, 3 ASIAN L.J. 39 (1996).
24. See Redding, *supra* note 7, at 594-95, 605-08; Borthwick & Schau, *supra* note 23, at 194, 199-203, 214-15, 226-36; Fossum, *supra* note 23, at 507, 530-32.
25. Unfortunately, past years' statistical reports from the American Association of Law Schools (AALS) do not include disaggregated statistics for Ph.D.s. See, *e.g.*, ASS'N OF AM. LAW SCHS., STATISTICAL REPORT ON LAW FACULTY 2008-2009, *Data from the Faculty Appointment Registers: Educational Degrees* (2009), <https://web.archive.org/web/20140627020438/http://www.aals.org/statistics/2009far/degrees.html> (reporting combined raw numbers of candidates with advanced law degrees, and of those with any advanced non-law degree, including master's degrees, Ph.D.s, and M.D.s).

Ph.D.s.²⁶ A decade later, a study of new faculty hired between 1996 and 2000 reported that Ph.D.s had taken an increasing share of entry-level jobs: 10.4% among all law schools, and 13.2% among the top twenty-five schools.²⁷

Unfortunately, while these findings do suggest an overall movement toward hiring Ph.D.s, much of the research is not directly comparable. Past studies examined different sets of law schools; we know, for instance, that 5% of all law schools' faculty held Ph.D.s in 1988-89, while 27% of the top twenty-six schools' faculty held Ph.D.s in 2010-11.²⁸ Some studies have reported on applicants, and others on those hired; we know that 12% of applicants in 2007-08 held Ph.D.s, while 10.4% of those hired at all schools in 1996-2000 held Ph.D.s, and 13.2% at top twenty-five schools did.²⁹

Thus, while this evidence suggests a trend toward increased Ph.D. hiring, it is hard to derive a definitive picture from past studies since they report on different underlying groups (*e.g.*, all schools versus a subset, or current faculty versus recent hires or applicants). The remainder of this article begins to fill in that gap by empirically documenting and disaggregating Ph.D. trends at elite schools over the past fifty years.

II. The Rise of Ph.D.s in Legal Academia

In this Part, we first explain our empirical methods. We then review our overall findings regarding the composition of law faculties and the rising share of Ph.D.s among them.

Several preliminary caveats are in order. Our data represent a snapshot of the 2011-12 faculty at a subset of the top-ranked law schools according to USNWR rankings; we treat this population as one composed of past hiring cohorts in order to examine trends over time. We examined only these schools in part for manageability reasons, but also because past evidence suggested that Ph.D. hiring was most concentrated among higher-ranked schools.³⁰ Given that the legal academic world has already changed since we collected these data (from the relative ranking of the law schools to the nature of the academic job market), the study should not be viewed as reflecting current reality, but rather as documenting shifting trends in hiring over time, along with the state of the world as of 2011-2012. We generally do not report tests of statistical significance throughout the article because our data represent population measures of current faculty at these thirty-four law schools, rather than samples. Still, it should be noted that some of the subsets that we identify include very small numbers, for which differences over time or among schools

26. Borthwick & Schau, *supra* note 23, at 213.

27. Redding, *supra* note 7, at 600 tbl.1.

28. *Compare* Hersh & Viscusi, *supra* note 19, at 489 & tbl.1C, *with* Borthwick & Schau, *supra* note 23, at 213.

29. *Compare* George & Yoon, *supra* note 7, at 21 & tbl.2, *with* Redding, *supra* note 7, at 600 tbl.1.

30. *See, e.g.*, Redding, *supra* note 7, at 600 tbl.1; sources cited at *supra* note 19.

are as likely to reflect chance variations as some underlying difference; we report the underlying “n” for all figures and tables. It is also possible that we may have missed some Ph.D.s. However, we generally focus our analysis more on trends and differences than on absolute levels; we have no reason to believe that such misclassifications would affect our primary analyses. In general, we did not attempt to hand-correct isolated coding errors within the data on a piecemeal basis, because doing so would introduce the risk of systematic bias. There is also the risk that current faculty might not be fully representative of past hiring cohorts as a result of variable attrition. But our approach is also the most straightforward, feasible way to derive systematic, comparable data on hiring trends over time. Ideally, future researchers would be able both to obtain actual hiring data for past years (including data on those not hired) and to extend the study further forward in time.

A. Methods

Data. We collected biographical data on tenure-track law faculty members at the schools ranked one to thirty in the USNWR 2011 rankings. This resulted in the inclusion of thirty-four schools because of a five-way tie for the thirtieth spot in the rankings. To identify the membership of each school’s faculty, we relied on each school’s online faculty directories as of the 2011-12 academic year. We excluded clinical faculty, law librarians, visiting or adjunct faculty, legal writing professors, and non-tenure-track faculty. We included those with cross-appointments, and erred toward overinclusion given the lack of information on the nature of the appointment (for example, we may have included some faculty with only courtesy appointments in the law schools).³¹ A team of seven undergraduate students was then trained to enter the following biographical data for those faculty using the 2010-11 and 2011-12 American Association of Law Schools (AALS) directories, supplemented by official faculty bios and CVs on school websites: birth year, year of first law school appointment, gender, self-identified minority status, educational degrees, year and awarding institution for each degree, listed field of doctoral degree if any, and whether the individual participated in law review, obtained a judicial clerkship (including the level of the court), worked as a federal government attorney, or was awarded Order of the Coif. In coding the Ph.D. field, we excluded the J.S.D. field (treating it as a separate degree), but did include the D.Phil. and other foreign Ph.D. equivalents.

Reliability. We checked the reliability of the dataset against a dataset that one of the authors previously constructed of the top sixteen law schools’ faculties, which shared certain data fields with ours (see Table 1). The correlation between the relevant data fields was relatively high, 0.89 or higher in most cases. Fields that showed less reliability included minority status (0.81), law review membership (0.83), and federal appellate clerkships (0.55).³² The

31. For further details, see the Methodological Appendix, *infra*.

32. We used the Pearson correlation coefficient as a measure of reliability across the two datasets,

minority status field differed because our dataset relied only on formally self-reported minority status in the AALS directory, while the cross-checked dataset supplemented this list with coder perceptions based on surnames and faculty photos.³³ We report our findings for this self-identified minority field (using only the AALS list) but caution that we believe it is underinclusive, since it is likely that not all faculty who identify as racial minorities have opted or been aware of the option to include their racial identity in the AALS questionnaire.

Table 1. Reliability: Comparison with Independently Coded Dataset

Variable	Mean 1	Mean 2	Correlation
Female	0.27 [997]	0.27 [998]	0.98
Minority	0.10 [998]	0.14 [998]	0.81
Ph.D.	0.32 [992]	0.31 [998]	0.94
Law Review Membership	0.55 [959]	0.52 [998]	0.83
Clerkship	0.55 [962]	0.54 [997]	0.91
Federal Appellate Clerkship	0.38 [962]	0.25 [997]	0.55
Supreme Court Clerkship	0.22 [960]	0.20 [997]	0.89
Year Began Teaching	1989.18 [932]	1989.25 [998]	0.96
Variable	Match Rate		
Institution Earned J.D. From	0.98 [866]		
Ph.D. Subject	0.97 [246]		
Note: Number of observations is in brackets below each mean. “Mean 1” refers to the primary dataset, and “Mean 2” to the comparison dataset. Both datasets reflect law faculties as of 2011-12.			

B. A Snapshot of the Top Schools’ Faculties

As Table 2 indicates, law professors at the thirty-four schools we studied are approximately 70% male, and nearly 90% did not self-identify as minorities in

along with the simple percent agreement for the non-numerical fields of J.D. institution and Ph.D. field. While there are more sophisticated measures of reliability (which are often used to assess the intercoder-reliability for judgment-based coding schemes—for example, those involving content analysis), our dataset consisted of straightforward biographical data. Given that our goal was to gauge the likely error rate of the student coders rather than to determine whether subjective judgments were being made in similar ways, we used the more basic measure of correlation between the two datasets.

33. We attribute the relatively low reliability of the two other fields (law review and appellate clerkships) to the use of undergraduate coders, who, despite their training, likely found it difficult to interpret the minimal, inconsistent abbreviations used for these fields in the AALS directory, and hence do not rely on these fields to any significant extent. We do not have similar concerns for the other fields given the high correlation between these coders’ work and the independently coded dataset. For a more detailed description of the coding process, please see the Methodological Appendix, *infra*.

the AALS directory.³⁴ Among those reporting their year of birth, the typical individual was in his late fifties at the time of data collection and had been teaching for an average of twenty years. Over 90% have J.D.s,³⁵ and at least half clerked and served on law review. A remarkable 41% hold J.D.s from Harvard or Yale. Aside from some aging, this is not markedly different from the standard profile reported decades ago: in 1973, the typical law professor at all schools was described as a forty-three-year-old white male who had been teaching for seven years.³⁶ As for credentials, in 2000 “the prototypical new law teacher graduated from an elite school (most often from Harvard or Yale), was on the staff of the law review or another journal while in law school, clerked for a judge (usually a federal judge), published one or two articles or notes (though many published nothing at all), and practiced for several years (usually in a law firm or a corporate counsel’s office) before entering academia.”³⁷

However, the composition of the current faculty is more varied than in the past. At the top thirty-four schools, 28% now hold Ph.D.s, while 31% are women and 12% are self-identified minorities (under 5% are self-identified women of color). Compare this to Borthwick & Schau’s report that in 1988-89, just 5% of all law professors held Ph.D.s, while 20% were women (11% at the top 7 schools); in 1987 Chused found that 5.4% of law professors were minorities.³⁸ Diversity has risen. But even when large numbers of minorities and women are hired, there is a limit to how quickly faculty composition can change; much depends on the age, tenure, and retirement rates of current faculty members.³⁹

34. This profile appears less diverse than that of law schools overall. The AALS reported in 2009 that law faculties at all schools, including non-tenure-track positions, were approximately 62% male, and at least 72% white (with over 13% not providing race), indicating that at least 15% are minorities; 7% were women of color. See Meera E. Deo, *Looking Forward to Diversity in Legal Academia*, 29 BERKELEY J. GENDER L. & JUST. 352, 357 & n.22 (2014) (citing ASS’N OF AM. LAW SCHS. 2008-2009 AALS STATISTICAL REPORT ON LAW FACULTY, GENDER AND AGE (2009) and ASS’N OF AM. LAW SCHS. 2008-2009 AALS STATISTICAL REPORT ON LAW FACULTY, RACE AND ETHNICITY (2009)).
35. We surmise that those not holding J.D.s primarily consist of faculty with joint appointments in other departments; as discussed in the text, however, we lack information as to what portion have voting status within the law schools or represent courtesy appointments.
36. Borthwick & Schau, *supra* note 23, at 197 (reporting findings from Siegfried & Scott, *supra* note 23).
37. Redding, *supra* note 7, at 596.
38. Borthwick & Schau, *supra* note 23, at 204 tbl.5, 213; Chused, *supra* note 23, at App. tbl.1.
39. Redding, *supra* note 7, at 600 tbl.1. On the relationship between hiring and current employee composition, see Justin McCrary, *The Effect of Court-Ordered Hiring Quotas on the Composition and Quality of the Police*, 97 AM. ECON. REV. 318, 323 & app.II (2007) (providing an approximation formula relating employment share to hiring and quit rates for that group, along with overall workforce growth rates). See also Lowell L. Hargens & J. Scott Long, *Demographic Inertia and Women’s Representation among Faculty in Higher Education*, 73 J. HIGHER EDUC. 494, 495-500 (2002) (discussing how forces of “demographic inertia,” including the age/sex composition and retirement rates of current faculty, constrain the rise in women among university faculties).

**Table 2. Law Faculty Summary Statistics, Top 34 Schools
(as of the 2011-12 year)**

Variable	Mean	Std. Dev.	Obs.
Female	0.31	0.46	1900
Self-Identified Minority	0.12	0.32	1900
Year Began Teaching	1990.82	12.80	1900
Has J.D.	0.92	0.27	1900
Has LL.M.	0.10	0.30	1900
Has J.S.D.	0.05	0.21	1900
Has other non-Ph.D. degree	0.41	0.49	1900
Has Ph.D.	0.28	0.45	1900
Harvard / Yale J.D.	0.41	0.49	1900
Served on Law Review	0.51	0.50	1900
Clerked	0.52	0.50	1900
Federal Appellate Clerk	0.36	0.48	1900
Supreme Court Clerk	0.15	0.36	1900
Birth Year	1955.45	11.10	1344
Year Earned J.D.	1984.72	12.38	1733

Note: Year began teaching was imputed for 19 faculty for whom it was missing, based on year earned JD and/or year earned Ph.D. Minority status is based on self-report in the AALS 2010-11 directory (or 2011-12 directory for faculty starting in 2011). We have complete case data for all but two of the other variables: birth year and year earned J.D., neither of which is central to our analysis, so we took no steps to impute them. "Non-Ph.D. degree" encompasses any other non-law graduate degree, such as an M.A.

As many sources have documented, Harvard and Yale's law graduates continue to dominate law faculty membership. Harvard has contributed 22.6% of the faculty members with J.D.s at the top thirty-four schools, and Yale 21.7%—a figure that is especially remarkable for Yale given its dramatically smaller class size.⁴⁰ The next-highest J.D.-granting schools, in terms of their share of these elite faculties, are: Chicago, Columbia, Stanford, Michigan, NYU, Virginia, Berkeley, and Georgetown.⁴¹

40. See George L. Priest, *Reexamining the Market for Judicial Clerks and Other Assortative Matching Markets*, 22 YALE J. ON REG. 123, 180-81 tbl.6 (2005) (listing Yale law school class size from 1990-2001 as ranging from 159 to 203); Daniel P. Mosteller, *Comparing the Titans: Harvard and Yale Law Schools Fight for Number One*, HARV. CRIMSON (Feb. 22, 2000), <http://www.thecrimson.com/article/2000/2/22/comparing-the-titans-harvard-and-yale/> (noting that Harvard Law's student body was almost three times larger than that of Yale).
41. Brian Leiter reports similar results in a study of more recently graduated law faculty (1995 and after) at what he defines as the top forty-three law schools based on the *USNWR* rankings and his own scholarly impact rankings. Brian Leiter, *Top Producers of Law Teachers at the Leading Law Schools Since 1995*, BRIAN LEITER'S LAW SCHOOL RANKINGS (Jan. 31, 2011), http://leiterrankings.com/new/2011_LawTeachers.shtml.

Table 3. Top Sources of Faculty J.D. Degrees among Top Thirty-Four Schools (as of the 2011-12 year)

Institution	Count	Fraction	Institution	Count	Fraction
Harvard	396	0.226	Penn	29	0.017
Yale	380	0.217	Northwestern	27	0.015
Chicago	110	0.063	Duke	20	0.011
Columbia	82	0.047	ULCA	16	0.009
Stanford	74	0.042	Texas	13	0.007
Michigan	73	0.042	Tel Aviv	12	0.007
NYU	61	0.035	U. Washington	12	0.007
Virginia	60	0.034	Minnesota	12	0.007
Berkeley	56	0.032	Wisconsin	11	0.006
Georgetown	31	0.018	Cornell	11	0.006
Total Count	1486				
Note: "Fraction" represents the share each J.D.-granting institution contributed of all faculty at the top thirty-four schools. Only the top twenty J.D.-granting institutions, according to the number of faculty produced, are listed; as a result, fractions do not sum to 1 and total count does not encompass all J.D.-holding faculty at the top 34 schools.					

As for the prevalence of Ph.D.s, they are indeed abundant at the schools we examined. More than one out of every four law professors in our sample (28%) holds a Ph.D.⁴² Table 4 depicts the relative share of various academic fields among those Ph.D.s. Economists, political scientists, historians, and philosophers represent the most prevalent disciplines, in that order. Other disciplines with notable shares include psychology, interdisciplinary law programs, sociology, and literature.⁴³

42. While we include foreign doctorates in law and interdisciplinary law Ph.D.s in our count, they represent only eight percent of the Ph.D. holders, so most of these are non-law Ph.D.s.

43. We note that the ratio estimates at the top of Table 4 are likely more reliable than those at the bottom, given the possibility of misclassification of some Ph.D.s resulting from interdisciplinary programs such as political economy, coder error, and underreporting to AALS by individual law faculty.

**Table 4. Ph.D. Degrees among Law Professors at Top Thirty-Four Schools
(as of the 2011-12 year)**

Ph.D. Subject	Number	Fraction All Ph.D.s	Fraction All Faculty
Economics	120	0.228	0.063
Political Science	89	0.169	0.047
History	82	0.156	0.043
Philosophy	67	0.127	0.035
Law	25	0.048	0.013
Psychology	21	0.040	0.011
Interdisciplinary Law	18	0.034	0.009
Sociology	16	0.030	0.008
Literature	14	0.027	0.007
Other Humanities`	11	0.021	0.006
Business	10	0.019	0.005
Policy	9	0.017	0.005
Religious Studies	8	0.015	0.004
Anthropology	6	0.011	0.003
Other Science	6	0.011	0.003
Mathematics	6	0.011	0.003
Other Social Science	5	0.010	0.003
Finance	4	0.008	0.002
Physics	3	0.006	0.002
Engineering	2	0.004	0.001
Statistics	1	0.002	0.001
Unknown	1	0.002	0.001
Education	1	0.002	0.001
Chemistry	1	0.002	0.001
None	1374	n/a	0.723
Total	1900		

Note: Some Ph.D. subjects have been grouped into more general categories; see Appendix for details. Fractions may add to more than 1 as a result of rounding.

The existence of interdisciplinary law Ph.D.s may mean that our data understate the role of certain disciplines. For example, sociology shaped both the law and society movement (which underlies many interdisciplinary approaches to law) and criminology. Yet individuals from both fields were counted within the interdisciplinary law category.⁴⁴ To the extent such degrees

44. Interdisciplinary law doctorates include such Ph.D.s as jurisprudence and social policy, law and society, socio-legal studies, and criminology. On the roots of the law and society

might be seen as specialized versions of sociology degrees, our data may understate the influence of sociology within the legal academy.⁴⁵ The same could also be true of other fields encompassed within the interdisciplinary law category, such as economics. Other interdisciplinary degrees generate additional boundary-drawing issues—for example, political economy degrees encompass both political science and economics coursework, but we chose to classify them within political science.⁴⁶

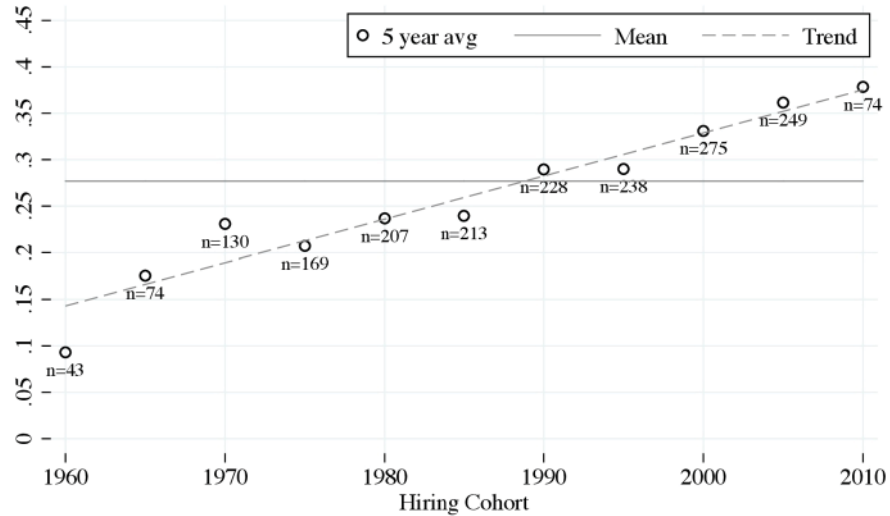
C. Ph.D.s Over Time

To explore trends in Ph.D. hiring and composition over time, we used the hiring year of current law faculty to disaggregate them into hiring cohorts.⁴⁷ Figure 1 shows that the proportion of Ph.D.s among law professors at the schools we studied has risen dramatically over time. The Ph.D. trend line starts below 15% in 1960 and rises to above 35% for the most recent cohort in our sample (those hired 2010-2011).⁴⁸

movement and criminology, see Adler & Simon, *supra* note 7, at 180; Jonathan Simon, *Law After Society*, 24 L. & SOC. INQUIRY 143, 154-67 (1999).

45. Under the simplest assumption, if we were to simply categorize all interdisciplinary law doctorates as sociology degrees, that would place sociology immediately after philosophy as the fifth most prevalent discipline. See *supra* Table 4.
46. See *PhD in Political Economy & Government*, HARV. KENNEDY SCH., <https://www.hks.harvard.edu/degrees/phd/peg> (last visited Dec. 10, 2015) (describing program).
47. This approach carries the risk that there might be variable rates of attrition for different types of faculty members, such that the current set of those hired in, say, 1960 is not representative of all those hired into tenure-track positions that year. Although we cannot exclude this possibility, we think it is unlikely to affect Ph.D. trend estimates, unless those holding Ph.D.s (or particular types of Ph.D.s) vary from other faculty in their likelihood of leaving academia. We investigated whether academics with both law degrees and Ph.D.s might be older when they began teaching, thus potentially leaving legal academia earlier than their peers from the same hiring cohorts, but found only slight differences between the mean and median ages at the start of employment for those with Ph.D.s and J.D.s versus those holding only J.D.s (mean age 33.5 versus 32.6, and median 33 versus 32).
Variable attrition might be a greater problem for our data concerning women faculty members, given the common concern that women are subject to more attrition and less likely to rise to the top of their professions over time. See, e.g., Marc Goulden et al., *Keeping Women in the Science Pipeline*, 638 ANN. AM. ACAD. POLITICAL & SOC. SCI. 141, 147 (2011) (reporting that married women with children are less likely than male counterparts to receive tenure once in a tenure-track science faculty position); Robyn Marschke et al., *Demographic Inertia Revisited: An Immodest Proposal to Achieve Equitable Gender Representation among Faculty in Higher Education*, 78 J. HIGHER EDUC. 1, 16 tbl.6 (2007) (reporting differential attrition rates for male and female faculty at major research university). Some studies have also found that minorities are subject to greater attrition from law teaching than whites. See Ass'n of Am. Law Schs., *Report of the AALS Special Committee on Tenure and the Tenuring Process*, 42 J. LEGAL EDUC. 477, 485-86 (1992) (reviewing tenure data for 1979-89); Chused, *supra* note 23, at 545 (concluding from 1986-87 survey data that minorities left law teaching at higher rates than their white counterparts).
48. We have grouped current faculty into five-year hiring cohorts and excluded those in pre-1960 cohorts because so few faculty members from those cohorts are still teaching. The 1960 cohort includes those hired 1960-64, the 1965 cohort includes those hired 1965-69, and so on. While we have not incorporated faculty data from those starting 2012 and later, other

Figure 1. Proportion of Hiring Cohort with Ph.D.



Note: All figures are based upon the fall 2011 faculty population at the top thirty-four schools; data are primarily from the 2010-11 and 2011-12 AALS directories. Numbers next to points indicate total number of faculty in each cohort. Each cohort encompasses five hiring years (e.g., 1960-64), except for the last cohort, which includes only 2010-11.

III. Disaggregating the Rise of Ph.D.s

Even as the overall share of Ph.D.s among law faculties has risen markedly, individual disciplines and specific schools have taken distinct trajectories. Some disciplines have increased their shares; others have declined. Some schools seem to have gone all-in for Ph.D. hiring, and others have held back.

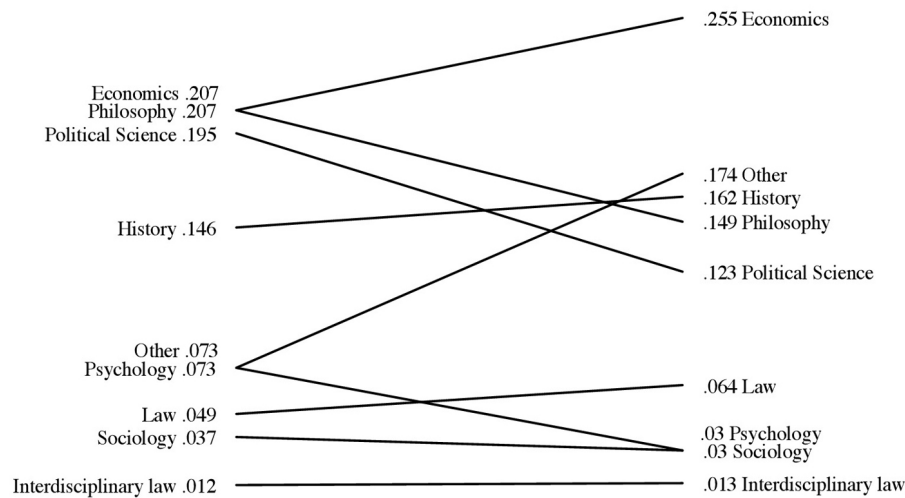
A. The Disciplines

Figures 2(a) and 2(b) depict the relative shares of the disciplines among the Ph.D.s hired into law faculties from 1960 forward. We first compare those hired between 1960 and 1979 to those hired between 1980 and 1999. The most

sources report that the proportion of Ph.D.s among those hires was high. LoPucki finds that from 2011-2015, 48% of new entry-level hires at top-twenty-six law schools held Ph.D.s, a figure that is even higher than the one we find for those hired 2010-2011. See LoPucki, *supra* note 7, at 507, Table 1 and accompanying text. An analysis by Sarah Lawsky on Prawfsblawg of self-reported data on all tenure-track law school hires shows sixteen Ph.D.s among 142 hires in 2012 (11.3%), twenty of 106 hires in 2013 (18.9%), nineteen of seventy-three hires in 2014 (26.0%), and eighteen of seventy in 2015 (25.7%). See Sarah Lawsky, *Spring Self-Reported Entry Level Hiring Report 2015*, PRAWFSBLAWG (May 19, 2015), <http://prawfsblawg.blogs.com/prawfsblawg/entry-level-hiring-report/> (prior years' data is also reported at that link). Alexander Tsesis compiled full data for 2013 hires, finding that 16.5% held Ph.D.s. Sarah Lawsky, *The 2013 Full Hiring Report* (Mar. 16, 2014), <http://prawfsblawg.blogs.com/prawfsblawg/2014/03/2013-full-hiring-report.html>. Building on the Prawfsblawg data, LoPucki found even higher Ph.D. hiring rates among the top twenty-six schools during 2011-2015, ranging from 25% to 69%. LoPucki, *supra* note 7, at 520, Table 5 and accompanying text.

striking trend moving into 1980-1999 is the upward surge in economists’ share, mostly likely attributable to the rise in law and economics as a force within law schools during that period.⁴⁹ Meanwhile, philosophy, political science, and psychology declined, and history, law, and sociology stayed relatively constant. However, the category of “other” Ph.D.s increased markedly in the second period; literature, other humanities, public policy, and religion were among the most prevalent types of Ph.D.s encompassed within that group.

Figure 2(a). Changes in Relative Shares of Ph.D. Disciplines among Ph.D. Law Faculty Hired, 1960-1979 Versus 1980-1999



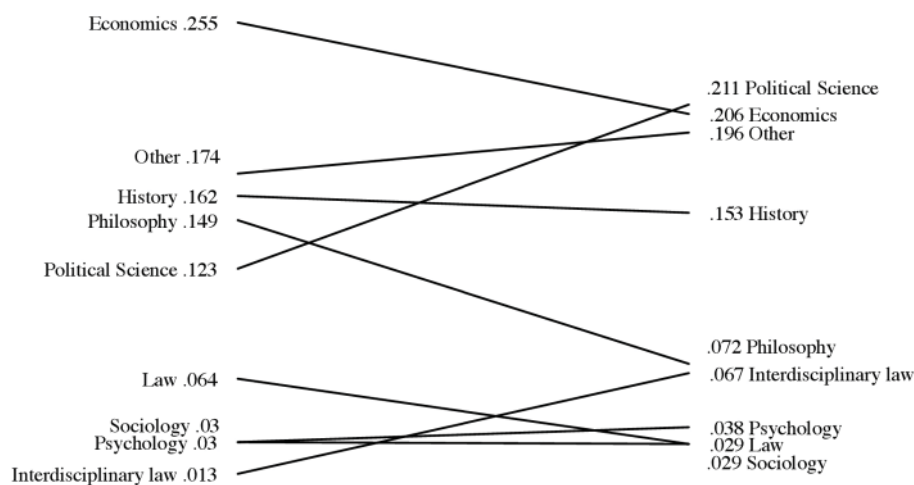
Note: Numbers represent relative proportions among faculty with Ph.D.s at top thirty-four schools as of 2011-12; numbers on left represent faculty hired 1960-1979 (n=82) and those on right represent faculty hired 1980-1999 (n=235).

Figure 2(b) shows subsequent changes, comparing those hired 1980-1999 with those hired 2000-2011. In the most recent period, economists’ share of those hired has returned to the pre-1980s level, while political science has regained its former share—with each field representing about a fifth of those Ph.D.s hired into the top thirty-four law schools. Further, the categories of interdisciplinary law Ph.D.s and “other” increased from 17.4% to 19.6% for the “other” Ph.D.s and from 1.3% to 6.7% for “interdisciplinary law” Ph.D.s. Given the variety of disciplines represented within interdisciplinary law programs and the “other” category, which encompasses everything from literature to

49. See Balkin, *supra* note 74, at 951 (describing law and economics as “wildly successful” during the 1990s); Tomlins, *supra* note 16, at 941-42 (attributing law and economics’ institutionalization to developments during the 1960s and 1970s).

mathematics to anthropology, the increases in these two categories attest to a growing disciplinary diversity.⁵⁰

Figure 2(b). Changes in Relative Shares of Ph.D. Disciplines among Ph.D. Law Faculty Hired, 1980-1999 Versus 2000-2011



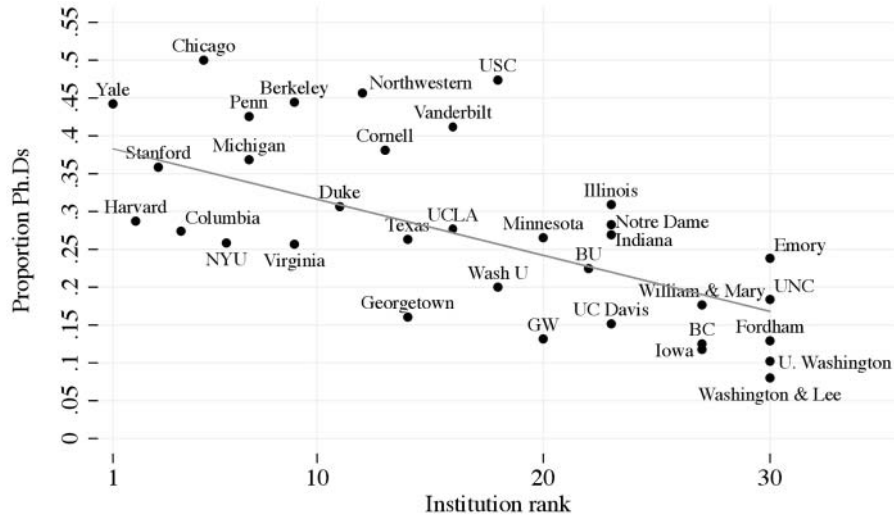
Note: Numbers represent relative proportions among faculty with Ph.D.s at top thirty-four schools as of 2011-12; numbers on left represent faculty hired 1980-1999 (n=235) and those on right represent faculty hired 2000-2011 (n=209).

B. The Schools

Law professors with Ph.D.s are heavily concentrated at the most highly ranked of the thirty-four schools we studied. Figure 3 shows the relationship between USNWR school rank and proportion of Ph.D.s among the faculty, indicating that there are fewer Ph.D.s at the lower-ranked schools in our study. There were also a number of outlier schools with high numbers of Ph.D.s relative to their USNWR rank. For example, Yale, Chicago, Penn, Berkeley, Northwestern, Cornell, Vanderbilt, USC, Illinois, and Emory are all noticeably above the trend line. This may suggest that some schools have consciously chosen a strategy of hiring Ph.D.s.⁵¹

50. Ph.D.s classified as “other” for purposes of Figures 2(a) and 2(b) include any doctoral degree that does not fit within the eight most prevalent Ph.D. categories listed in those figures, including hard sciences, other social sciences (*e.g.*, anthropology), and the humanities (*e.g.*, literature). Among 526 holders of Ph.D.s in the dataset, we were forced to classify the Ph.D. category as “Unknown” in only one instance. A possible indicator of the rise of quantitatively based scholarship in legal academia is the fact that among the “other” Ph.D.s hired from 1960 to 1979, none had their doctorate in the hard sciences, finance, mathematics and statistics, or policy, whereas from 2000 to 2011, 39.0% of “other” Ph.D.s came from one of these four areas.
51. For example, by at least 2003, Northwestern’s law school apparently had embarked on a strategy of hiring Ph.D.s. See Van Zandt, *supra* note 5, at 335 (stating, as then-dean of Northwestern, that “the majority of our recently hired faculty are J.D./ Ph.D.s.”). Again,

Figure 3. Proportion Ph.D.s on Law Faculty by Law School Rank (as of the 2011-12 year)



Note: Rankings along x-axis are from USNWR 2011 law school rankings. Total count for law school faculties ranges from n=25 to n=106.

Law schools also vary widely in the relative proportion of economists, political scientists, and historians within their faculties, a factor that may help shape schools’ distinctive identities. As Table 5 indicates, Chicago, Yale, and Stanford had the highest proportions of economists in 2011, while Berkeley, Northwestern, and Cornell had the highest representations of political scientists. Chicago, Yale, and USC had the highest proportions of historians. To the extent some schools have reputations for particular disciplinary focuses, these figures may bear them out—Chicago, at least, has been prominently associated with law and economics, and economists apparently compose

we note that there is the possibility of isolated misclassification of Ph.D. status of particular faculty members. While this might affect specific schools’ values, we do not believe it would alter the overall trend. Further, Figure 3’s school-specific data may have shifted since 2011 as a result of hiring and departures, so it should be taken as a snapshot of these faculties at that point. These proportions also may represent inexact comparisons among schools because they may include faculty from other departments holding only “courtesy” appointments in law at some schools. Our coding was based primarily on whether the faculty member was listed on the law school’s website and held a title of professor of law, at any rank. For the outlier schools with Ph.D. proportions above 0.40, we checked to see whether overinclusion of faculty teaching primarily in other departments might have affected the proportions that we found. Consulting the AALS directories for 2010-11 and 2011-12, we eliminated faculty with Ph.D.s who were not listed in either directory, taking this as a rough proxy for a strong institutional affiliation with the law school. Only Chicago and Vanderbilt were affected by the adjustment. Chicago’s proportion of Ph.D.s fell to 0.405 (from 0.500) and Vanderbilt’s to 0.302 (from 0.412), bringing them more in line with other schools.

more than twenty percent of their faculty members.⁵² Vanderbilt, USC, Northwestern, Cornell, and Duke, stand out for having high shares of faculty with Ph.D.s from other disciplines besides the three most prevalent ones.

Table 5. Schools with Highest Percentages of Faculty from Select Disciplines (as of the 2011-12 year)

Economists	Political Scientists	Historians	All Other Disciplines
Chicago (22.7)	Berkeley (11.1)	Chicago (13.6)	Vanderbilt (23.5)
Yale (15.4)	Northwestern (10.9)	Yale (9.6)	USC (22.8)
Stanford (15.1)	Cornell (9.5)	USC (8.8)	Northwestern (21.7)
Penn (14.9)	UCLA (7.7)	Harvard (7.4)	Cornell (21.4)
Berkeley (13.9)	Stanford (7.5)	Illinois (7.3)	Duke (17.7)

Note: Numbers in parentheses represent the percentage of the school's faculty holding a Ph.D. in the indicated discipline. Individuals with appointments in other departments were included as law faculty if listed in the AALS directory or the law school's online faculty directory with a title indicating an appointment in law. For additional details, see the Appendix.

IV. Implications of the Rise

In this Part, we probe the implications of the shift toward Ph.D. hiring, asking whether it has meant a declining emphasis on more traditional legal academic credentials, and what it might mean for gender and racial diversity. We also ask how this structural shift in law faculties' composition will affect law schools and legal education more generally.

A. Are Ph.D.s Replacing Traditional Hiring Credentials?

Law schools have traditionally relied on hiring criteria such as high grades, law review membership, and Supreme Court clerkships, which serve as proxies rather than direct indicators of likely scholarly productivity.⁵³ The "prototypical new law teacher" in the late 1990s had a J.D. from an elite school, law review membership, a federal clerkship, a publication (article or student note), and several years of practice experience.⁵⁴ Past evidence also suggested that people sometimes used graduate degrees—LL.M.s, for example—to burnish their resumes, compensating for perceived shortcomings in their traditional credentials such as a less prestigious J.D. institution or low law school grades.⁵⁵

52. However, after adjusting by eliminating non-AALS-listed faculty as described above (see *supra* note 51), the percentage of economists among Chicago's faculty fell to 16.2% and that of historians fell to 10.8%, while Vanderbilt's share from disciplines other than economics, political science, and history shifted to 14.0%.

53. *Cf.* Merritt & Reskin, *supra* note 23, at 238-40 & tbl.4, 275-76 (1997) (reporting that law review membership and federal appellate clerkships made it more likely that new law professors would be hired at elite schools).

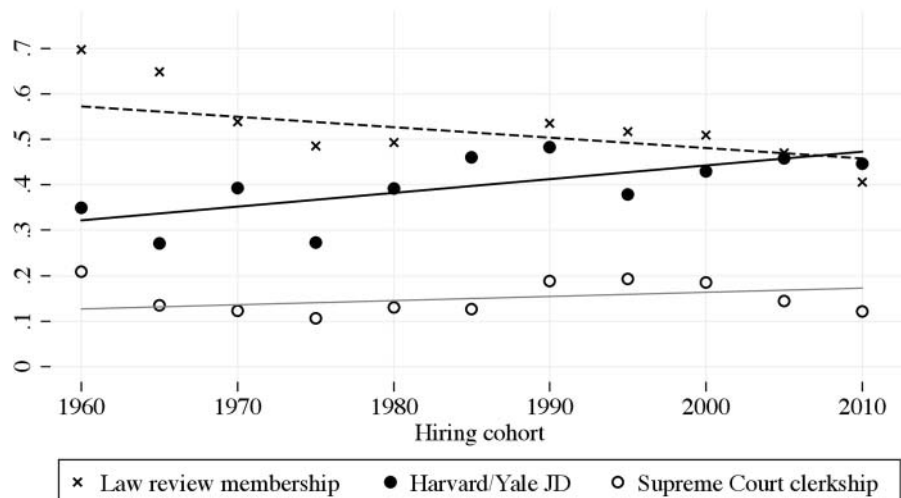
54. Redding, *supra* note 7, at 612.

55. Fossum, *supra* note 23, at 519-20 (reporting, in study of faculties in 1975-76, that "[law]

In the present, this raises the question of whether the shift toward hiring Ph.D.s has brought with it a shift away from the traditional credentials. Perhaps law schools now place greater weight on other indicia or candidates have sought Ph.D.s as a way to supplement other credentials. Has that been the case? Has the shift toward Ph.D.s been accompanied by a shift away from other credentials?

Figure 4 offers little evidence of any shift away from the traditional credentials overall. As we noted, our law review and clerkship data are less reliable than we would wish.⁵⁶ But to the extent the data are roughly accurate in their representation of time trends, no major shift away from these credentials appears to have occurred, though reported law review membership has declined.

Figure 4. Proportion of Those Hired with Traditional Law Faculty Hiring Attributes, by Cohort



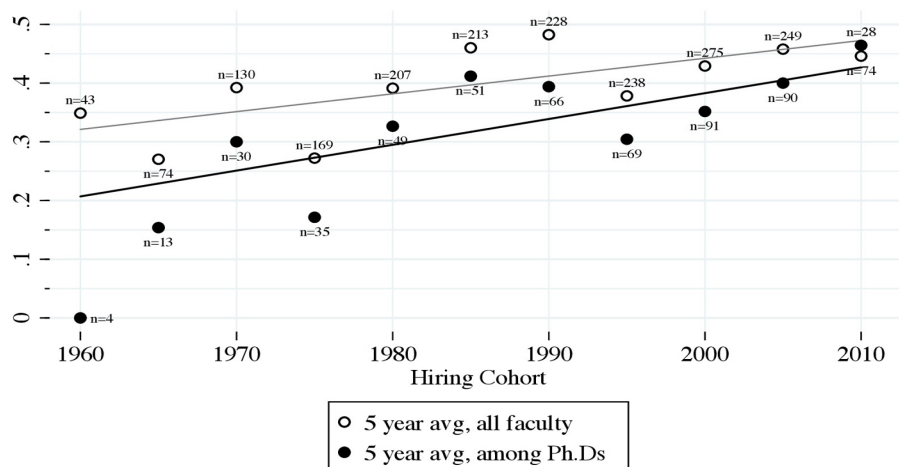
Note: Counts for each cohort are as follows: n=43 (1960), n=74 (1965), n=130 (1970), n=169 (1975), n=207 (1980), n=213 (1985), n=228 (1990), n=238 (1995), n=275 (2000), n=249 (2005), n=74 (2010). Only the coefficient on the Harvard/Yale J.D. trend line was significantly different from zero (p = 0.043).

teachers apparently acquired the LL.M. degree to compensate for what they perceived as inadequacies in their other credentials”); *id.* at 526-27.

56. See *supra* notes 32-33 and accompanying text. It is notable that the proportion of Supreme Court clerks is steady, though the number of Supreme Court clerks available for hire is small and has remained relatively constant over time, given that the number of clerks per justice has been fixed at four since 1974. See David Stras, *The Supreme Court's Gatekeepers: The Role of Law Clerks in the Certiorari Process*, 85 TEX. L. REV. 947, 952 (2007) (book review). An earlier study reported a significant overall increase in faculty hires with any judicial clerkships, with the share nearly doubling from 1975-76 to 1988-89; it is quite possible that the share of hires with lower federal court clerkships has continued to rise since then. Borthwick & Schau, *supra* note 23, at 214-15.

Notably, the proportion of Harvard and Yale J.D.s appears to be rising substantially over time at the top thirty-four law schools, both among all faculty and among the subset with Ph.D.s, as Figure 5 depicts. What Redding wrote in 2003 remains true: “[M]ore than ever, those hired are graduates of Harvard or Yale.”⁵⁷ Instead of triggering a move away from standard credentials, the shift toward Ph.D.s may simply be part of a move toward increasing all types of formal credentials. Or the trend may not represent a search for credentials at all, but simply highlight the increasing attention of hiring committees to candidates’ publication records and scholarly agendas. Ph.D. programs offer aspiring law professors a chance for sustained research and writing before entering the market. The increase in Ph.D.s thus might be a proxy for schools’ greater emphasis on evidence of candidates’ likely scholarly output, like the reported trend toward hiring those who have completed law teaching fellowships, which also provide time for sustained research and writing before candidacy.

Figure 5. Harvard/Yale J.D. Proportion of Hiring Cohort, for All Hires and Those with Ph.D.s



Note: Numbers next to points indicate total number of faculty in each cohort, for all faculty and those with Ph.D.s, respectively.

For those concerned with institutional diversity, the continued upward trend in the representation of Harvard and Yale graduates among law professors might be troubling.⁵⁸ Is the law teaching market an oligopoly, with only a few schools competing to provide legal academics?⁵⁹

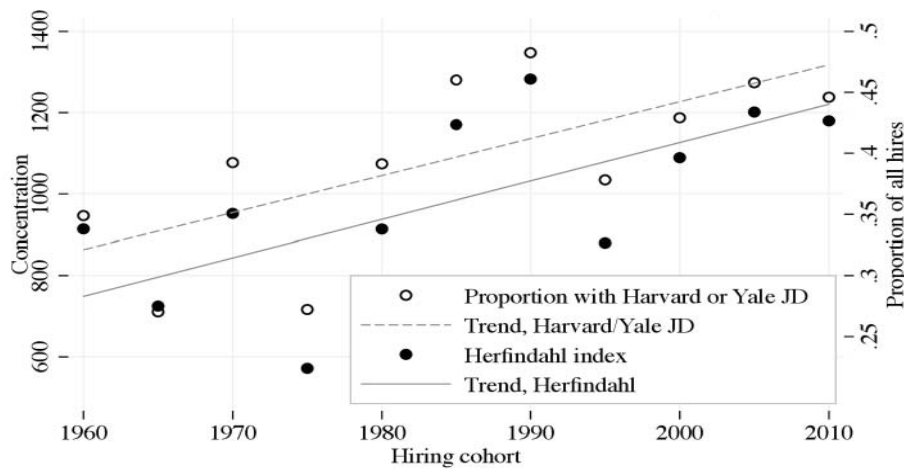
57. Redding, *supra* note 7, at 607. A third of all new tenure-track hires between 1996 and 2000 had a Harvard or Yale JD. *Id.* at 599.

58. Cf. Paul Horwitz, *What Ails the Law Schools?*, 111 MICH. L. REV. 955, 971 (2013) (book review) (citing “the homogenization of the law school faculty, with its heavy concentration of Yale and Harvard graduates seeking to recreate their own law school experience in the hinterlands.”).

59. Cf. Daniel Gordon, *Hiring Law Professors: Breaking the Back of an American Plutocratic Oligarchy*, 19

We applied a well-known measure of market concentration used by antitrust regulators, the Herfindahl-Hirschman Index, as a way of gauging relative concentration among institutional suppliers of law professors.⁶⁰ While the Herfindahl Index increases by approximately fifty percent over the past fifty years, it never exceeds typical benchmark scores used to gauge concentrated markets.⁶¹ At the same time the dominance of Harvard and Yale J.D.s in the elite legal academic market increases from about one-third of professors to almost one-half. The reason the Herfindahl Index never reaches levels of concern results largely from law professors at these elite schools coming from an increasing range of law schools, mitigating the effect of the overall rise in the proportion of Yale and Harvard J.D.s to some extent.

Figure 6. J.D.-Granting Institutional Concentration, by Cohort



Note: The Herfindahl Index measures market concentration, and equals the sum of each entity's squared market share. Counts for each cohort are as follows: n=43 (1960), n=74 (1965), n=30 (1970), n=169 (1975), n=207 (1980), n=213 (1985), n=228 (1990), n=238 (1995), n=275 (2000), n=249 (2005), n=74 (2010).

WIDENER L.J. 137, 149-53 (2009) (critiquing Harvard and Yale J.D.s' dominance among law professors as reflecting "[a]n American law-teaching oligarchy").

60. The Herfindahl Index is used by the Department of Justice in assessing horizontal mergers. It is calculated by first determining the market share of each entity, squaring that share, and summing the squares, with a value of 10,000 indicating a monopoly. See *Herfindahl-Hirschman Index*, DEP'T OF JUSTICE, <http://www.justice.gov/atr/public/guidelines/hhi.html> (last visited Dec. 14, 2015).
61. The Herfindahl Index within the law market remained below 1300 throughout the period studied; scores above 1500 show moderate market concentration, and any score above 2500 indicates a highly concentrated market.

B. What Does the Ph.D. Trend Mean for Women and Minorities?

How has the trend toward hiring Ph.D.s at elite law schools affected gender and racial diversity? One might imagine that the move toward Ph.D. hiring would negatively affect women and racial minorities, given that they have historically been underrepresented among Ph.D.s. For example, Redding found that in 1996-2000 twice as many of the newly hired male law professors held Ph.D.s as did new female professors.⁶² However, in recent decades the supply of women and minority Ph.D. holders has grown tremendously. Women have dramatically increased their share of those earning Ph.D.s over time, increasing from 9.8% to 44.7% of all social science doctorates from the 1960s to the late 1990s in the United States.⁶³ Racial minorities have also gained an increasing share of Ph.D.s, obtaining 14.1% of all Ph.D.s awarded by the late 1990s, and 21.1% of all social science Ph.D.s awarded by 2012.⁶⁴

Both women and minorities, however, remain underrepresented among the overall groups of those possessing Ph.D.s relative to their population shares, and relative to their representation among all law professors. In our dataset, 28.3% of the law professors with Ph.D.s were women (while women made up 31.4% of law faculty without Ph.D.s), and only 8.6% were self-identified minorities (compared to 13.1% of faculty without Ph.D.s). We examined this question, and other potential disparities across groups, in greater detail by disaggregating the data by gender and self-identified minority status.

Table 6 captures differences across groups: Non-minority men have earlier average start years, and are at higher-ranked institutions relative to the other groups. In other words, women and minorities have made significant inroads in law teaching only recently, and faculties at the most elite of the thirty-four schools we studied remain somewhat less diverse than those ranked below them. Figure 7 charts the relationship between school rank and women's representation on the tenure-track faculty.

62. Redding, *supra* note 7, at 603 (17.3% versus 6.8%).

63. See NAT'L SCI. FOUND., U.S. DOCTORATES IN THE 20TH CENTURY, NSF REPORT 06-319, at 19, fig.3-11 (2006) <http://www.nsf.gov/statistics/nsf06319/pdf/nsf06319.pdf> (Women's Share of Doctorates Earned by U.S. Citizens by Major Field). We point to social science Ph.D.s because those are the most heavily represented fields within law schools.

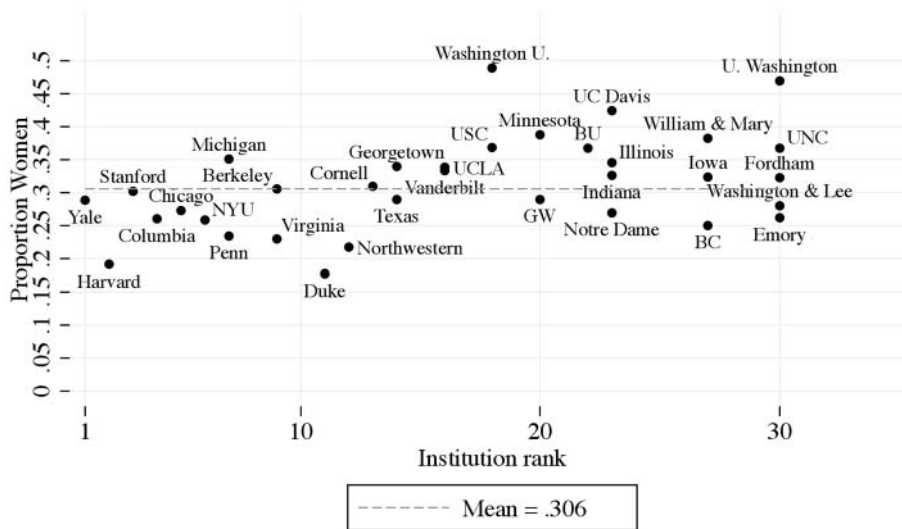
64. See *id.* at 20, fig.3-13, (reporting proportions among U.S. citizens); NAT'L SCI. FOUND., WOMEN, MINORITIES, AND PERSONS WITH DISABILITIES IN SCIENCE AND ENGINEERING 144, tbl. 7-4 (2015), <http://www.nsf.gov/statistics/2015/nsf15311/nsf15311.pdf> (hereinafter WOMEN, MINORITIES) (U.S. citizens and permanent residents); see also MARK K. FIEGENER, NAT'L SCI. FOUND., NUMBERS OF DOCTORATES AWARDED IN THE UNITED STATES DECLINED IN 2010, at 3 (2011), <http://www.nsf.gov/statistics/infbrief/nsf12303/nsf12303.pdf> (reporting proportions among U.S. citizens and permanent residents).

Table 6. Counts & Means by Gender and Self-Identified Minority Status (as of the 2011-12 year)

	Minority Women	Minority Men	Non-Minority Women	Non-Minority Men
Count	92	133	489	1186
Start Year	1995.2	1995.3	1994.3	1988.6
Institution Rank	17.0	16.0	16.2	14.7
Has J.D.	.97	.99	.92	.91
Harvard/Yale J.D.	.54	.59	.36	.40
LL.M or J.S.D.	.13	.08	.12	.11
Has Other Non-Ph.D. Degree	.39	.38	.42	.42
Has Ph.D.	.15	.23	.28	.29
Economics Ph.D. (n=120)	.01	.06	.03	.08
Political Science Ph.D. (n=89)	.03	.07	.04	.05
History Ph.D. (n=82)	.03	.05	.06	.04

Note: Minority status is based on self-report in the AALS directory. "Other Non-Ph.D. Degree" encompasses any other non-law graduate degree that is not a Ph.D. or foreign Ph.D.-equivalent.

Figure 7. Proportion Women on Law Faculty by Law School Rank (as of the 2011-12 year)



Note: Rankings along x-axis are from USNWR 2011 law school rankings. Total count for law school faculties ranges from n=25 to n=106.

Minority faculty members had the highest proportion of J.D.s, perhaps reflecting their lower representation among Ph.D.-only faculty. And the rate of Harvard/Yale J.D.s was strikingly high among both minority men and women (59% and 54%, respectively, compared to 40% and 36% for non-minority men and women), indicating that they are even more heavily credentialed in this aspect than non-minorities at this group of top law schools.⁶⁵

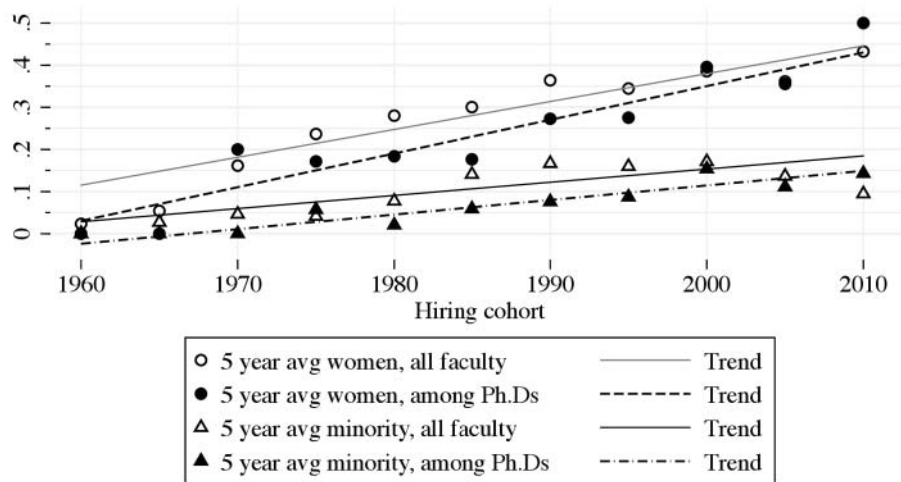
However, self-identified minority law professors held proportionally fewer Ph.D.s than whites, though the rates varied markedly by gender. Among the three most heavily represented disciplines there was even more variation once gender categories were disaggregated among these groups. The highest proportion of economics Ph.D.s came among non-minority men (8%), followed by minority men (6%). Minority men held the highest proportion of political science Ph.D.s (7%), followed by non-minority men (5%).⁶⁶ Non-minority women led the way in proportion of history Ph.D.s (6%), followed by minority men (5.0%). Although we did not include it in the table, we also examined psychology, since it is a well-represented social science discipline that is sometimes seen as less “male”—here, though there were very small numbers, non-minority women held the highest proportion of psychology Ph.D.s (2%), and we found no self-identified minorities. The fields of sociology and interdisciplinary law were similar in pattern to psychology—non-minority women were best-represented, with almost no self-identified minority men or women included from these fields at top schools as of the 2010-2011 academic year. This is surprising, given that sociology and psychology are relatively diverse fields—African-Americans and Hispanics together made up 18.8% of sociology Ph.D.s earned in 2012, and 16.0% of psychology Ph.D.s, while Asian-Pacific Americans represented another 5.8% and 5.9% of Ph.D.s earned in those respective fields.⁶⁷ Future research might examine what drives Ph.D.s in these fields to go into law teaching, and why relatively few minorities appear to be following that path.

Figure 8 compares the trends in female and self-identified minority representation among all law faculty with the trends among those holding Ph.D.s, to see whether women and minorities are better- or worse-represented among those with Ph.D.s and how that has changed over time. In general, there

65. Perhaps discriminatory gatekeeping processes filter out minority candidates without those credentials. See Angela Onwuachi-Willig, *Complimentary Discrimination and Complementary Discrimination in Faculty Hiring*, 87 WASH. U. L. REV. 763, 791-92 & n.105 (2010) (discussing reasons that minority candidates are judged more stringently than whites).
66. This does not so much reflect the large number of minority male political scientists as the small total number of minority men in these law teaching positions; our data included nine minority male political scientists, while there were only 133 minority male faculty members overall.
67. NAT'L SCI. FOUND., WOMEN, MINORITIES, *supra* note 64, at 144, tbl. 7-4 (percentages derived by dividing total raw numbers by raw number of African-American and Latino Ph.D. recipients in each field for given year). Other fields listed were the overall category of social sciences (13.9% African-American and Latino), economics (5.9% African-American and Latino), and political science (16.9% African-American and Latino).

are fewer women and minorities among the Ph.D.s than among all law faculty. Both women and minorities have increased their representation among Ph.D.s over time, but women appear to be gaining share at a faster rate. The share of women among all faculty and among those faculty holding Ph.D.s seems to be converging. For minorities, while there is recent evidence of convergence and the trend line is upward, the representation of minorities among all law faculty has fallen in the past decade, indicating that overall minority representation may no longer be on a linear upward trend.⁶⁸

Figure 8. Women and Minority Proportion of Hiring Cohort, for All Hires and the Subset with Ph.D.s



Note: Counts for each cohort are as follows: Total n=43, Ph.D. n=4 (1960); Total n=74, Ph.D. n=13 (1965); Total n=130, Ph.D. n=30 (1970); Total n=169, Ph.D. n=35 (1975); Total n=207, Ph.D. n=49 (1980); Total n=213, Ph.D. n=51 (1985); Total n=228, Ph.D. n=66 (1990); Total n=238, Ph.D. n=69 (1995); Total n=275, Ph.D. n=91 (2000); Total n=249, Ph.D. n=90 (2005); Total n=74, Ph.D. n=28 (2010).

The sharply different trends for women and minority representation on these law faculties is one that should be investigated further. As already noted, some faculty who would affirmatively identify as minorities may not have listed themselves as minorities in the AALS directory, so these figures are probably best seen as evidence of likely underlying patterns, rather than as presenting exact counts. Unfortunately, there is still insufficient research on diversity among law faculty for us to confirm these trends with others' data, though efforts are being made to fill the gap.⁶⁹ To the extent the disparities

68. A more optimistic possibility is that recently hired law professors might be less likely to list themselves as minorities in the AALS directory, given a lack of familiarity with the directory and the questionnaire on which it is based.

69. See Deo, *supra* note 34, at 355-56 (noting "limited statistical data" and lack of qualitative data on law faculty diversity). For a selection of existing studies, see also *supra* note 23 and sources

we report are in fact broadly reflective of underlying reality, they highlight the need for follow-up research to clarify the patterns, to assess why Ph.D. holders within the legal academy might be less diverse than the underlying fields' demographics would predict, and to determine whether more recent cohorts since 2011 have included more minorities.⁷⁰ If minority share is indeed falling on elite law faculties after decades of progress, it is a troubling trend.

C. Implications for Legal Education

What does the shift toward Ph.D.s imply for the future of legal education? The nexus between law and social science, and the appropriate relationship of these fields within legal education, has been debated and studied for well over a century. Here we can only scratch the surface of what the present shift might bring in the future.⁷¹ One way to understand the current surge in Ph.D.s is through the lens of debates over the appropriate emphasis on practical training versus producing scholarship. But we believe, and past history tends to confirm, that the implications of the trend are not as simple as a trade-off between practical experience and scholarship.⁷² Ideally, the relationship between practice and scholarship would be synergistic, rather than zero-sum.⁷³ Scholars and practitioners offer one another key insights, methods, and knowledge that can enrich both communities. Cutting-edge scholarship in the law school world often addresses questions with real-world importance for lawyers, advocates, and policymakers. At the same time, the world of law and policy depends on academic research for much of its empirical foundation and methodological progress—in other words, practitioners also benefit from social

cited there. See generally Meera E. Deo, *The Ugly Truth about Legal Academia*, 80 BROOK. L. REV. 943 (forthcoming 2015) (discussing the initial findings of Deo's Diversity in Legal Academia project).

70. The list might also be overinclusive. Cf. Mark Trumbull, *Elizabeth Warren and Cherokee Heritage: What Is Known About Allegations*, CHRISTIAN SCI. MONITOR, (Sep. 26, 2012), <http://www.csmonitor.com/USA/Elections/Senate/2012/0926/Elizabeth-Warren-and-Cherokee-heritage-what-is-known-about-allegations> (reporting on controversy over former Harvard law professor, and now-Senator Elizabeth Warren's self-identification as a minority in past AALS directories).
71. Michael Adler & Jonathan Simon have linked historical growth spurts in social science engagement with law (including one beginning in the 2000s) to underlying political and social forces, including major government regulatory interventions and the expansion of funding from foundations and academic institutions. See Adler & Simon, *supra* note 7, at 177-84.
72. See *supra* notes 16-17 and accompanying text.
73. There is a long history of polarizing scholarship and practice in legal education, though frequently the dichotomy has been constructed between legal theory and practical skills. For a representative criticism, see Carrie Menkel-Meadow, *Narrowing the Gap by Narrowing the Field: What's Missing from the MacCrate Report—Of Skills, Legal Science and Being a Human Being*, 69 WASH. L. REV. 593, 595 (1994).

science and humanistic research on law.⁷⁴ Scholars trained in other disciplines as well as in the law bring an extra set of tools to bear; the ability to pursue additional modes of inquiry should expand and diversify our conversations about law. For those reasons, interdisciplinary scholarship and real-world training should not have to be distinct (or even opposing) goals.⁷⁵ If they are approached in the right way, interdisciplinary research and teaching and practical legal questions can be deeply interwoven.⁷⁶ But considering how to go about this in concrete ways will require both innovative thinking and careful planning of law school curricula.⁷⁷

74. See, e.g., Barbara Bennett Woodhouse, *Bringing Theory, Doctrine, and Practice to Life*, 91 MICH. L. REV. 1977, 1991 (1993) (“[I]n family law, interdisciplinary studies are not a distraction from, but a critical part of, modern lawyering. It would be futile to isolate legal doctrine and practice from psychology, economics, sociology, religion, and history . . .”). See also J.M. Balkin, *Interdisciplinarity as Colonization*, 53 WASH. & LEE L. REV. 949, 968 (1996) (“Economic analysis of law spread into legal scholarship as a new way of carrying out the basic research programs of American legal scholarship: the rational reconstruction of existing doctrine and the evaluation of competing rules in terms of what best served public policy.”).

It is noteworthy that our data suggest growing interest in interdisciplinary law degrees, alongside traditional disciplinary credentials. Building connections between disciplinary research and law often requires experts who can bridge the disciplinary world and the legal world—in fact this has long been a function of legal academics. “Legal scholars, as interdisciplinary experts, [can] . . . help[] to transfer the arcane insights of various disciplines to practical matters outside the disciplinary fences.” Stephen M. Feldman, *The Transformation of an Academic Discipline: Law Professors in the Past and Future (Or Toy Story Too)*, 54 J. LEGAL EDUC. 471, 494 (2004).

75. Cf. *Texas Law School Deans Discuss: The Future of the Law School Curriculum*, 69 TEX. B. J. 764, 766 (2006) (describing clinical education and interdisciplinary study as positioned on opposite sides of doctrinal law teaching).
76. E.g., Kim Diana Connolly, *Elucidating the Elephant: Interdisciplinary Law School Classes*, 11 WASH. U. J.L. & POL’Y 11 (2003); Woodhouse, *supra* note 74.
77. See, e.g., Woodhouse, *supra* note 74, at 1980 (from viewpoint of professor of child and family law, “describ[ing] and defend[ing] a mode of teaching that consciously attempts to bring theory, doctrine, and practice together by structuring ‘practical’ experiences in a classroom setting”). Without such groundwork, it is quite possible for interdisciplinary work to remain partitioned off from actual legal education. In the past, that has often been the case:

[E]ven though law professors continually absorb ever new and exotic forms of theory from without, they continue to teach their students the same basic skills using the same basic methods. They say one thing in their law review articles, but do another in their classrooms. They teach their students to parse cases and statutes (still mostly cases), and they teach them to argue about what rules would best promote sound social policy.

Balkin, *supra* note 74, at 966.

In this article, we approach the question of the relationship of the disciplines to legal education from the perspective of legal education, rather than that of the disciplines. Scholars have faulted the tendency of law to mine the disciplines, seeking renewed foundations for legal authority in empiricism, without achieving true integration between law and those disciplines. See, e.g., Tomlins, *supra* note 16, at 965 (“The story of law’s disciplinary encounters to date has by and large been one of law’s successful appropriation of what it could use and its indifference to, and eventual discard of, what it could not.”).

At the same time, there is potential cause for concern as law schools increasingly turn to Ph.D.s, especially if this is part of a general rise in demand for indicators of academic prestige. That may carry unrecognized costs—an increased demand for particular types of formal credentials, especially costly ones like Ph.D.s, may mean that gender and racial diversity suffers. Women, minorities, and the working class may all find greater barriers to attaining such credentials, especially when obtaining those credentials requires trade-offs in time and earnings. They are also disproportionately represented in some disciplines, and not others, meaning that the disciplinary mix among those Ph.D.s hired directly affects faculty diversity in these areas. Our data are too preliminary to draw any firm conclusions on these questions (and we lack any data at all on class background), but law schools should flag the issue as an important concern if they continue to shift toward Ph.D.s and other high-cost credentials. They may also wish to adopt specific measures to help counteract this risk, such as changing recruiting practices and targeting fields with higher representations of women and minorities.

Conclusion

For anyone interested in the future of legal education, these data give rise to substantial and difficult questions: What direction should law schools take in selecting their faculties? How can goals for faculties like intellectual diversity, inclusiveness, and merit be pursued and measured?⁷⁸ What kind of knowledge do we seek to produce about the law, and what kind of skills and knowledge do we seek to instill in lawyers? How do such goals map onto practical choices among different credentials for law teaching, including candidates' educational degrees and fields, work experiences, and research agendas? While these issues are ongoing topics of conversation in the legal academy, they are not always approached systematically by hiring committees, faculties, and the broader community of those invested in legal education.

There are also many pragmatic questions to be asked regarding the overall credentials used to gain law faculty positions. How does the composition of faculties affect the expense and utility of legal education? We did not attempt to measure practice experience, but any discussion of law teaching raises the question of whether future professors' practice experience should be more heavily valued. Given the apparent trade-off between time spent in Ph.D. training and practice experience, what is the right balance for law schools to

78. The merit of law professors may in fact consist of factors that are poorly captured by traditional measures such as citation counts. Just as lawyers' professional competence rests on a wider range of skills than often recognized, law professors' competence to train them likely does as well. See Kristen Holmquist, et al., *Measuring Merit: The Shultz-Zedeck Research on Law School Admissions*, 63 J. LEGAL EDUC. 565, 566 (2014) (“[P]rofessional competence requires not only the analytic quickness and precision that law school currently seeks, teaches and rewards but . . . also . . . relational skills, negotiation and planning skills, self-control and self-development, creativity and practical judgment, among other proficiencies.”).

strike between the skills associated with those credentials?⁷⁹ Is it possible that J.D.-Ph.D.s are acquiring other rich forms of real-world knowledge along the way that may also serve their students? More research is needed to trace the connections, trade-offs, and potential synergies between disciplinary training and a well-rounded legal education for students.

How will the Ph.D. trend affect gender and racial diversity? Will women continue to gain share while minorities see slower gains within the legal academy, and how much of that is connected to the Ph.D. shift? Does a shift toward Ph.D.s among law professors affect the pursuit of equality in other ways? For example, are those trained in other disciplines less likely to have practiced public interest law? Or are they perhaps more likely to focus on the real-world implications of legal doctrine for marginalized groups relative to those with only traditional private-sector legal experience?

Is the Ph.D. hiring trend here to stay? If the trend has been driven in part by exodus from other disciplines' hiring markets given the perceived greater number of law jobs, perhaps the trend will change given the recent sharp downturn in law school hiring.⁸⁰ If the higher salaries available in law schools relative to other academic units within universities are driving the shift, this too may change if the salary gap within universities narrows. University administrations might also react to the downturn in law schools' income by pushing law schools to refocus on traditional hiring credentials. On the other hand, if Ph.D. hiring is an elite trend, and elite schools are well-insulated from the market's downturn, perhaps greater gaps will open up between schools. It is conceivable that a few of the most elite schools will continue to hire Ph.D.s while other high-ranked institutions turn back to (or maintain their focus on) traditional credentials and practice experience.⁸¹

All of these issues call for further research. For example, assembling fine-grained data on hiring over multiple years would give a more precise picture of actual hiring trends at specific institutions. More comprehensive datasets might also be able to track the relationship between Ph.D. training and practice experience, or even inquire into how Ph.D. training in particular fields changes the perspective and approach of law teachers, the scholarship

79. In his study of Ph.D. hires at top twenty-six schools from 2011-15, LoPucki reported that they had fewer years of practice on average than J.D.-only hires: 0.9 years versus 3.6 years, including clerkships. LoPucki, *supra* note 7, at 522-23, Table 7 and accompanying text. We note that to the extent law schools also increasingly have shifted toward hiring candidates from fellowships or Visiting Assistant Professor (VAP) positions, that shift may also impose trade-offs if candidates forgo practice experience in order to enter those positions.

80. See sources cited at *supra* note 48 (reporting significant year-by-year declines in recent entry-level hiring based on self-reported hiring data).

81. Certainly, there is no sign of any downturn as of yet; LoPucki's findings for 2011-15 entry-level hiring indicate that the Ph.D. hiring trend has not slowed. See LoPucki, *supra* note 7, at 536, Table 16 and accompanying text.

they produce, or where it is likely to be cited.⁸² More detailed data would also help answer questions about the effect of the Ph.D. trend on diversity in law schools.

However, the questions we have posed are not simply empirical ones, but also require more profound normative judgments about law schools' institutional missions, along with tactical decisions about how best to pursue those missions. Making such judgments will require law schools to carefully consider why they are pursuing interdisciplinary hiring, and to balance that goal against others in light of their missions and values. Former Berkeley Law Dean Christopher Edley has argued that the Ph.D. hiring trend is driven by law schools' increasingly close relationships with other parts of large research universities, and that cross-disciplinary training promises to create "effective societal problem-solvers."⁸³ Two decades ago Jack Balkin also lauded the potential for law's interaction with other academic disciplines, calling the legal academy an "interdisciplinary crossroads" that had rendered law "one of the most absorbing intellectual subjects" of the time.⁸⁴ But for observers of varied perspectives, the interaction of law with the disciplines seems not yet to have met its promise, and continues to generate concerns. That deeper conversation about law schools' mission and future, and the role of interdisciplinary approaches within them, is already a rich and active one. We hope the data we have presented here will help ground the conversation, while provoking new questions and lines of inquiry going forward.

Methodological Appendix

Faculties from Top Thirty-Four Law Schools

We constructed a list of tenure-track faculty members from the schools ranked one to thirty in the U.S. News & World Report (USNWR) "Schools of Law" rankings published in spring 2011. (This included faculty members from thirty-four schools, because five law schools tied for the rank of thirtieth.) We used each school's website listing of its current faculty for the academic year 2011-12, basing our judgments on academic title and courses taught, if listed. We excluded those teaching primarily clinical or skills courses, as well as law librarians, adjunct professors, lecturers, visiting professors, professors of practice, and emeritus faculty. Faculty with joint or primary appointments in other departments were included if they were listed on the law school website as faculty members with titles in law. While this may have resulted in the overinclusion of faculty from other departments, including those with only courtesy appointments to the law faculty, we believed that it was the most practical and consistent rule for inclusion.

82. In this regard, we note that Professor LoPucki's study within this issue takes important steps toward addressing some of these questions. See LoPucki, *supra* note 7.

83. Edley, *supra* note 5, at 315, 318-19.

84. Balkin, *supra* note 74, at 951.

We then developed coding rules for a team of seven undergraduate students to use in coding biographic data for each faculty member. The student assistants were instructed to use the American Association of Law Schools (AALS) Faculty Directory for 2010-11 as their primary data source, drawing on the directory's biographical listings and its separate list of self-identified minorities, and to examine faculty's biographical web pages if necessary to find information on faculty educational degrees. The following fields were coded: name, title, institution, gender, self-identified minority, birth year, year of first tenure-track appointment, J.D., J.D. institution, J.D. year, Ph.D., Ph.D. institution, Ph.D. subject, Ph.D. year, J.S.D., J.S.D. institution, J.S.D. year, other degree, other degree institution, other degree field, whether the person participated in J.D. school's flagship law review, whether any judicial clerkship was held, and if so, whether the person held a federal appellate clerkship and/or a U.S. Supreme Court clerkship, whether the person worked as a federal government attorney, and whether the person listed Order of the Coif honors. Thus, the Ph.D. field excluded J.S.D. degrees, but included foreign Ph.D. equivalents such as the D.Phil.; one holder of an Ed.D. also was included.

At the end of this stage and following initial cleaning for obvious errors, we had an initial dataset of 1923 faculty member observations, with varying amounts of data for different fields. Of the fields collected for all faculty members, this ranged from a low of 1359 observations for "birth year" (a field that many omitted from the AALS biography) to a high of 1923 observations for "self-identified minority" (because we used the AALS directory's list and coded anyone not listed as non-minority).

The student coders were instructed to simply reproduce the individual's Ph.D. field as originally listed in the AALS directory. We relied on the individual's reported original Ph.D. field rather than any other discipline in which she or he may have subsequently worked or published. For comparability and ease of aggregation, one of the authors subsequently reviewed all Ph.D. subjects listed and grouped them into twenty-three broader fields. See Appendix Table 1, below, for a complete list of how more specific subjects (reproduced as listed by the individual faculty member, including joint or interdisciplinary subjects) were categorized into these fields. Most of this grouping was straightforward. In a few instances, supplementary research was used. For example, the two individuals listed in our dataset as holding Ph.D.s in criminology obtained degrees respectively from UC Irvine's Department of Criminology, Law and Society and from Penn's Wharton School; we decided to classify criminology within the "Interdisciplinary Law" category.

Reliability of Coding

We compared this initial dataset with a smaller dataset on law faculties at the top sixteen law schools (1,011 observations), independently compiled by one of the authors. We had a higher level of confidence in the accuracy of the second dataset because of the author/coder's Ph.D. and law training, whereas the primary dataset was collected by undergraduates. As noted in the

main text, since our coding involved transcribing straightforward biographic data, our primary concern was accuracy (not differing subjective assessments), and for that reason we used a simple measure of correlation between the two datasets rather than the more sophisticated measures used to evaluate intercoder reliability in studies involving the coding of qualitative content. We were able to match 998 of our observations by name and institution (the initial primary dataset had 1066 observations for the top sixteen schools). Among matched observations, the correlation between numerically coded fields varied from a high of 0.98 for gender to a low of 0.54 for federal appellate clerkship (this field was especially low, as all other matched fields had a correlation of at least 0.80). The qualitative fields of J.D. school and Ph.D. category matched respectively at a rate of 0.98 and 0.97. See Table 1 in the main text for all correlation and matching results.

Most fields appeared to be reasonably reliable. We decided that the following fields were low in reliability, likely due to the undergraduate assistants' lack of familiarity with law credentials and the minimal, inconsistent abbreviations used in the AALS directory: federal appellate clerkship, federal government attorney experience, and flagship law review membership. The "self-identified minority" field also had a relatively low correlation (0.81), but this appeared to be because the second dataset relied not only on self-identification but also on the coder's subjective assessment. Finally, based on the low number of reported Order of Coif honors, it appeared that most faculty did not supply Order of the Coif data for the AALS directory, rendering that field unreliable.

In general, we did not attempt to hand-correct isolated coding errors within the data on a piecemeal basis, because doing so selectively runs the risk of systematic bias while doing so unselectively involves cost and may be less replicable. However, in reviewing the student-coded data, we identified one category where concern with coding error motivated us to recode the data: the self-identified minority category. Given our belief that this category involved substantial underreporting insofar as it reflected items on an AALS questionnaire that some faculty may have inadvertently skipped, we wished it to be as complete as possible. We therefore systematically rechecked that category and recoded any omissions we found.

Supplementing Missing Data

Working once again with the full primary dataset, we supplemented the data collected by the undergraduates by doing additional searches to identify missing data for several fields. We checked Ph.D. subject data for ninety-four faculty members who were listed as possessing a Ph.D. but were missing the subject field, and were able to supply those data for ninety-three observations. One hundred fifty-two observations lacked a start year (*i.e.*, the year of their first tenure-track appointment). We were able to fill in start year for 127 observations. We next rechecked the 174 faculty who were listed as lacking J.D.s or were missing that field. We determined that twenty-two of them actually possessed J.D.s, and we supplied J.D. school and J.D. year for

nineteen of those faculty. We also supplied J.D. year for twenty-four additional faculty that were missing that field.

Imputation

At this point, we lacked start year data for twenty-four observations. We imputed a start year for nineteen of those faculty in the following way: For all those with a J.D., we regressed their start year on their J.D. termination year and an indicator for whether they held a Ph.D. We used those coefficients to generate a predicted value for the thirteen faculty with J.D. termination years but missing start years, and used this as their imputed start year value. To fill in remaining values, we regressed start year on Ph.D. termination year, and generated a predicted value for the six remaining faculty who were missing a start year but had Ph.D. termination years, and used this as their imputed start year value.

Final Dataset

At this point we had 1923 observations. To create the final dataset, we dropped one mistakenly included administrator, dropped the five observations that still lacked a start year after imputation, and dropped fifteen observations with start years prior to 1960 (ranging from one observation in 1949 to four observations in 1959). We also dropped two mistakenly included observations with a start year of 2012—leaving us with 1900 observations. We recoded certain variables’ missing data as “No,” on the assumption that if we did not find evidence that the individual faculty member holds that credential, then she or he does not. That matched the assumption we used on initial coding for many of the credential fields. The variables we recoded in this way were the clerkship fields, the law review field, J.S.D., and other non-Ph.D. degree.

Appendix Table 1. Ph.D. Categories, with Specific Subjects Included

Category	More Specific Subjects	
Anthropology	Social Anthropology	
Business	Business Administration	Business Economics
	Management	Operations Research
	Managerial Economics & Decision Sciences	Business (Political Economics)
	Business & Public Policy	
Chemistry		
Economics	Labor Economics & Industrial Organization	
	Economics, Finance & Industrial Organization	
Education		
Engineering	Electrical Engineering	

Category	More Specific Subjects	
Finance	Finance & Economics	
History	American History	American Legal History
	European History	History & Middle Eastern Studies
	History & Social Study of Science & Technology	History of American Civilization
	Intellectual History	Medieval History
	Modern History	United States History
	Legal History	History of Science
	Interdisciplinary Law	Jurisprudence & Social Policy
Law	Criminology	Legal Studies & Business Ethics
	Law & Society	Law & Government Regulation
	Doctor of Law	Dr iuris (Terminal Degree in Law)
	Constitutional Law	Comparative Private Law
	Laws	Comparative Law
Literature	Islamic Law	
	English	Comparative Literature
Mathematics	English Literature	Victorian Literature
Other Humanities	Arts. Ed.	Classics
	Germanic Studies	Near Eastern Studies
	Humanities	American Civilization
	Classical Studies	American Studies
Other Science	Ocean Sciences	Botany
	Behavioral Sciences	Computer Science
	Wildlife Ecology	
Other Social Science	Social & Economic Studies	Communication
	Geography	Linguistics
Philosophy	Philosophy & Math	Religion / Political Philosophy
	Moral & Political Philosophy	Political Philosophy
	Ethics	Medieval Arabic Philosophy
Psychics		
Policy	Health Policy	Public Policy
	American Foreign Policy	Policy Science & Civil Engineering
	Public Affairs	Public Policy & Sociology

Category	More Specific Subjects	
Political Science	American Politics, Public Law & Public Administration	Government
	Political Theory	Politics
	Political Economy	International Relations
	European Governmental Studies	
Psychology	Social Psychology	Psychoanalytic Science
	Experimental Social Psychology	Developmental Psychology
Religious Studies	Religious Ethics	Christian Theological Ethics
	Religion (Islamic Studies)	Theology
Sociology		
Statistics		
