

TENURE ACHIEVEMENT RATES AT RESEARCH UNIVERSITIES

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Introduction

This paper argues that colleges and universities could and should do a better job of collecting, analyzing, and sharing data that can inform judgments about the effectiveness, rigor, and fairness of the tenure process. This paper focuses on one very basic question: “What proportion of new assistant professors achieve tenure?”

Our reading of the literature suggests that discussions on the topic of academic career progression are vital and current, but that even in the most credible and cogent research in this area, an important piece of evidence is missing. There is a hole in the information available to higher education observers, scholars, and administrators who struggle with and debate many issues involved in the management of faculty resources – issues that touch on the core of the academic enterprise.

In this paper, we highlight analyses of tenure achievement at a single university over the past decade. We also present results from a unique data exchange among ten member universities of the Association of American Universities, showing the percentages of new assistant professors who received tenure within seven years at each of those schools. The paper includes some detail by gender and minority status, and summarizes information from other sources. We believe that analyses such as these can help inform judgments about the effectiveness, rigor, and fairness of many institutions’ tenure processes.

Tenure Achievement Rates in Context

“What proportion of new assistant professors achieve tenure?”

To an outside observer, this might appear to be a straightforward, even simplistic, factual question about a basic operational dimension of colleges or universities. However, if that outsider imagines that either higher education as a whole, or individual colleges and universities,

have an answer at hand, he or she would probably be mistaken. There are no national-level datasets or data-exchange conventions for sharing information on tenure flow; as far as we can tell, most institutional research offices do not even track those data for their own institutions. In short, it seems that higher education is missing a fundamental piece of organizational self-knowledge.

Tenure has been a topic of fairly intense interest across higher education since at least the mid-1990s. In 1997, Harvard's Richard Chait, who has been outspoken about and in many respects critical of the institution of tenure, wrote, "Tenure has become the academy's version of the abortion issue – a controversy marked by passion, polemics, and hardened convictions" (Chait, 1997, p. B4).

More recently, *The Chronicle of Higher Education's* first-ever "What Presidents Think" survey was completed by nearly six of ten of the nation's four-year college and university presidents (Fogg, 2005). On many of the items, there was pretty clear agreement and the results seem fairly easy to understand. For example, from 75 percent to over 90 percent of the presidents agreed on matters such as affirmative action, military recruiting on campus, the need for better outcomes assessment, and more. Interestingly, a question about tenure was more divisive. Of the presidents responding, 53 percent said they agreed that tenure for faculty members should be replaced by a system of long-term contracts, while 39 percent disagreed. The language used to discuss tenure was fairly strong, with phrases such as "condemnation" and "harass and harangue" and "disheartening."

Equally relevant to this paper are several important dimensions of faculty life that intersect with tenure practices and outcomes. Those dimensions include faculty compensation, recruitment and retention of minority faculty, and issues at the juncture of family decisions and careers.

Higher education has long been concerned with issues of faculty compensation and the economic status of the profession; witness the American Association of University Professors' annual salary studies ("The Devaluing of Higher Education," 2006). In the everyday world in which individual professors live, rank and tenure status are obviously factors that influence what they earn. This reality is of course understood, but the impacts of the promotion and tenure process on faculty compensation are generally not acknowledged nor explored in these salary studies.

An interesting thread is also emerging in the literature on academic career progression in relation to gender, care-giving, and family matters. Recent articles in *Academe* on "do babies matter?" (Mason & Goulden, 2002; Mason & Goulden, 2004) and on the "bias against caregiving" in both *Academe* (Drago, Colbeck, Stauffer, Pirretti, Burkum, Fazioli, Lazarro & Habasevich, 2005) and *Change* (Colbeck & Drago, 2005) are bringing considerable attention to substantive issues at the juncture of family decisions and academic life. Those researchers point toward some troubling differences in average age at tenure for various groups, and suggest that having a family may slow the career progress of female faculty members. The articles mentioned above typically include ideas for changes in institutional practice to formalize and clarify effective and fair work/family policies; they also recommend that universities allow stopping the tenure clock for

up to two years, and provide reduced-load options for faculty who are seriously ill or who have primary care responsibilities for children, parents, or partners.

Colbeck and Drago's 2005 article in *Change* is an example of the general approach of these analyses. In that article, the authors incorporated data from three different sources. They drew upon 2001 National Survey of Postsecondary Faculty data on chemistry and English faculty members at 507 colleges and universities. They also conducted and reported on eleven case studies, using a combination of faculty focus groups, interviews, and institutional data. In addition, the researchers carried out detailed, structured observations (that is, shadowing) of thirteen chemistry and English faculty at two research universities. Based on this rich variety of information, as well as a review of related studies, Colbeck and Drago concluded that within the departments and universities that they studied, tenure-line faculty members faced a bias against family caregiving.

Likewise, Mason and Goulden, the “do babies matter?” researchers, drew their national data from the National Science Foundation's survey of earned doctorates. That is a useful and appropriate source for questions about career paths of Ph.D. recipients. However, it does not address the tenure-success question. For more specific employment pattern analyses, those authors relied on data for faculty at the University of California, Berkeley.

We cite these studies because we believe they show that even in cogent and sophisticated research on academic career issues, an important piece of evidence is missing. The “bias against caregiving” researchers (Drago, Colbeck and colleagues) did find some objective evidence of bias by comparing the average age at tenure for various cohorts in the faculty groups that they studied. But their analysis was limited by the unavailability of data on, for example, tenure success rates and/or time in rank that would enable cross-discipline or inter-institutional comparisons. Because the hard data available to Mason and Goulden were similarly limited, they assumed that the data for faculty at Berkeley “are representative of those at other major research universities” (Mason & Goulden, 2002, p. 22). If more complete national datasets were available, that assumption would be testable.

In summary, in reading this literature, we are struck by two ideas. First, the good news. Questions and discussions on the topic of academic career progression are vital and current, and they are gaining visibility within higher education. Observers are raising legitimate real-world concerns. Second, the not-so-good news. Some of the debates about the strengths and weaknesses of the tenure process occur largely as matters of opinion and anecdote. And even in the most credible research on the topic, a careful reader can often infer gaps. We stress that we are not suggesting flaws in the scholarship cited above. Our argument, instead, is that even in serious, research-based analyses of academic career progression, there is a hole that well defined and broadly comparable data on tenure achievement could help fill.

Methodological Considerations

To address factual questions about tenure rates, institutional researchers typically choose from among three different approaches.

The first and most familiar method simply provides a snapshot of the percentage of total faculty who are tenured. This figure can vary considerably across institutional types, by institution, and even among schools within an institution, but it is usually readily available for a given college or university. This is also the approach for which benchmarks are most accessible. The periodic National Survey on Postsecondary Faculty, for example, shows that nationally 55 percent of full-time faculty are tenured (NSOPF, 2004). Snapshots such as those, while descriptive, say little about the rigor of the tenure process, or about the probability that an individual entering the process will eventually emerge with tenure.

The second approach examines the proportion of end-point decisions that result in the awarding of tenure. At many colleges and universities this figure is usually in the vicinity of 90 percent (a half dozen institution-specific studies are cited below). While this is a reasonable, basic data point, taken alone it is not especially revealing. It only captures final decisions, and says little about the rigor of the process overall, or the likelihood that a newly appointed assistant professor will or will not achieve tenure at some point in the future.

A third approach, which this proposal emphasizes, tracks one or more cohorts of newly appointed assistant professors over a period of seven years or so. Such cohort studies are more complex than either of the options described above, but they are nonetheless manageable for IR staff with access to longitudinal institutional data.

A Single-Institution Example

2006 marks the ninth consecutive year in which Penn State has analyzed the rates at which its provisionally appointed faculty achieve tenure.

Penn State employs over 5,000 full-time faculty members (this headcount includes lecturers, librarians and research faculty). Of these, about 2,900 are either tenured or on the tenure track. The following data are university-wide counts for full-time faculty in fall 2005 for 24 campuses.

Tenured	1,991	(39%)
Provisional	900	(18%)
<u>Other</u>	<u>2,176</u>	<u>(43%)</u>
Total	5,067	(100%)

(Source: Penn State, 2006)

As shown in Table 1, in any given year, about 100 to 180 faculty members enter provisional status at Penn State. For the last nine entering cohorts – that is, those beginning in 1990 through 1998 – 55 percent of new entrants had received tenure by the end of their seventh year on the tenure track.

Table 1 also shows Penn State’s tenure rates by gender and minority status. Going back to 1990, tenure rates for females have been lower than for males (47 percent and 59 percent), and tenure

rates for minority faculty have been lower than for non-minority faculty (51 percent and 56 percent).

Each year, these data are shared by Penn State's senior administration with deans and the University Faculty Senate. Those reports attempt to place Penn State's data in some broader context, but in the past the analyses were constrained by the lack of directly comparable external benchmarks. The 2004-05 report (Penn State 2005a) did summarize findings in reports from research universities including Miami University of Ohio (Krallman, 2003), Penn State University (Dooris, 2003), Stanford University (Robinson, 1999), the University of Minnesota (Jones & Hoenack, 1992), the University of Missouri (Eimers, 1995), and the University of Wisconsin-Madison (Harrigan, 1997). But these studies each used idiosyncratic definitions and designs. Some examined outcomes over a six-year period, others over a seven-year period; some reported descriptive statistics while others used multivariate techniques; and so on. Because of definitional and methodological limitations, comparisons among the tenure-flow profiles for these institutions were offered cautiously, as indicated by the following excerpt (Penn State, 2005a, pp. 4-5):

Definitions and methodologies do vary somewhat among the peer institution studies that have been found... comparative tenure rates appear to in the range of about 40 percent to about 70 percent. The picture is mixed on the effects of gender; in some cases, women are tenured at higher rates, and in others at lower rates. With one exception... the peer institution studies reviewed here did not relate differences in tenure rates to minority/non-minority status... Again, the comparisons are imprecise, but Penn State's overall tenure rates appear to fall about in the mid-range of available benchmarks.

Association of American Universities Data Exchange

To provide a stronger, more comparable set of benchmark data, we recently invited institutional research colleagues to participate in a first-time exchange on tenure achievement rates. Table 2 summarizes the information collected through this special one-off data exchange among ten peer universities that participate in the Association of American Universities Data Exchange (AAUDE).

In keeping with the AAUDE agreement, individual institutions are not identified alongside their data in Table 2. However, it is permissible to note which universities are included: Florida, Illinois, Iowa, Maryland, Michigan, Northwestern, Penn State, Pittsburgh, Rutgers, and Wisconsin. In all cases, except for Penn State, the data are for a single (main) campus, and the data are defined as in Table 1 unless otherwise noted. That is, the data are for a seven-year period, starting from the time an individual first entered provisional status.

As Table 2 shows, Penn State's tenure rate of 54 percent (for the cohort that entered in 1997-98) is about in the mid-range of this group of universities, for which the average rate is 53 percent. Also, the male-to-female and minority-to-non-minority patterns at Penn State are basically similar to the patterns reported by these peer institutions. The data show that for these

universities, females trail males and minorities trail non-minorities in the rates at which they achieve tenure.

Ongoing Challenges, New Questions, and Opportunities for Improvement

Numbers such as those shown in Table 1 and Table 2 only show what happened; they don't explain why. Penn State has been exploring some of the deeper questions raised by these data through several mechanisms. One of those is an annual faculty exit survey and interview process, conducted since 1997. That study shows, for example, that departing female faculty are younger (age 45 versus age 54) than their male counterparts, and that females are more likely than males (50 percent versus 30 percent) to report that they left because of a more attractive position elsewhere. A complete report on that project is available online (Penn State, 2005b). In addition, a series of focus groups with faculty who have had leadership responsibilities in the promotion and tenure process (having served, for example, as department heads or on promotion and tenure committees) has provided additional insight on this topic.

Questions that have bubbled up from Penn State's faculty have highlighted an underlying belief that initial tenure recommendations from the departments are frequently overturned at subsequent steps in the process – in particular, at the college level. Institutional researchers created the analysis summarized in Table 3 to investigate that question. As shown in Table 3, and contrary to what many faculty members thought they knew, the large majority of college-level reviews are consistent with the recommendations coming from Penn State's departments and campuses. In the 2004-05 academic year, 86 percent to 96 percent of the second- and fourth- and sixth-year cases reviewed at the college level resulted in recommendations for continuation or early tenure. And although the data are not tabulated in this paper, a similar pattern was demonstrated for earlier years (Penn State 2005a). Historically, the percentages of positive recommendations at the college level have usually been in the low-80s to mid-90s. This has been true of decisions about candidates overall, males and females, minorities and non-minorities, and across the years of review (that is, for second- and fourth- and sixth-year reviews).

Similar studies have also clearly shown that the approval percentage at the university level has almost always been over 90 percent. In other words, outcomes at the university level are very consistent with the recommendations that the university committee and the president receive. 2004-05 was no exception to that pattern, with a rate of 99 percent at the university level. Ninety-five dossiers for promotion and tenure (that is, to associate professor or the equivalent library or research ranks) were forwarded to the university committee on promotion and tenure. That committee recommended 94 of these for promotion and tenure, and the president approved all 94 cases. Again, this reality is probably at odds with what some Penn State faculty members thought they knew about the process.

Conclusions

Institutional research on the tenure process and related matters at Penn State has, as we have already noted, been openly shared within the university, and discussion about these issues is encouraged and ongoing. The feedback from the exit interview process and from focus groups on

the promotion and tenure process has, for instance, suggested that mentors can make a substantial difference in the experience for provisional faculty, and that the mentoring process differs considerably among schools and colleges. This finding has been incorporated into university-level faculty development workshops, and into the operating approaches in some of Penn State's academic units.

More generally, we believe that the absence of clear, objective information can make it difficult for faculty members or administrators in any college or university to reach solid judgments about the effectiveness and fairness of their institution's tenure process, or to have honest conversations with external stakeholders and observers about the nature, strengths, and weaknesses of the tenure system. Data such as those presented here can help to accurately portray institutional realities, to lead to further examination, and to identify opportunities for improvement.

Data alone do not solve problems or change practices, but they can inform conversations, enhance understanding, and sharpen decision making. Opportunities for improvement no doubt remain, but more researchers are beginning to pay attention to these topics, and greater awareness and better data may be starting to emerge.

References

- Chait, R. (February 7, 1997). Why academe needs more employment options. *The Chronicle of Higher Education*, B4.
- Colbeck, C. & Drago, R. (November-December 2005). Accept, avoid, resist: How faculty members respond to bias against caregiving...and how departments can help. *Change* 37(6), pp. 10-17.
- Dooris, M.J. (November 2003). *Tenure track progression of assistant professors*. Paper presented at the Northeast Association for Institutional Research Annual Meeting, Newport, RI.
- Drago, R., Colbeck, C., Stauffer, K.D., Pirretti, A., Burkum, K., Fazioli, J., Lazarro, G. & Habasevich, T. (September-October 2005). Bias against caregiving. *Academe* 91(5), pp. 22-25
- Eimers, M. (May 1995). *Exploring faculty career progression: A retention and tenure perspective*. Paper presented at the Annual Forum of the Association for Institutional Research, Boston, MA.
- Fogg, P. (November 4, 2005). A Chronicle survey: What presidents think. *The Chronicle of Higher Education*. Retrieved October 31, 2005 at <http://chronicle.com>
- Harrigan, M. (October 1997). *An analysis of faculty turnover at UW-Madison*. Paper presented at the Association of Institutional Researchers of the Upper Midwest's Annual Meeting, Minneapolis, MN.
- Jones, L.K. & Hoenack, S.A. (October 1992). *A model of the career development of tenure track assistant professors*. Paper presented at the Annual Meeting of the Association for the Study of Higher Education, Minneapolis, MN.
- Krallman, D. (April 2003). *Tenure rate by gender, 1982-1995, Miami University – all campuses*. Office of University Budget and Institutional Research, Miami University, Miami, Ohio. Personal communication to Michael J. Dooris.
- Mason, M.A. & Goulden, M. (November-December 2002). Do babies matter? *Academe* 88(6), pp. 21-27
- Mason, M.A. & Goulden, M. (November-December 2004). Do babies matter (Part II)? *Academe* 90(6), pp. 11-15.
- National Survey of Postsecondary Faculty (2004). Tables run online October 4, 2005 at <http://nces.ed.gov/das>

Penn State (2005a). Faculty tenure-flow rates, January 2005. Vice Provost for Academic Affairs and Office of Planning and Institutional Assessment. Retrieved February 9, 2006 at http://www.psu.edu/president/pia/planning_research/reports/index.htm

Penn State (2005b). Faculty exit survey, 1997-98 through 2004-05. Office of Planning and Institutional Assessment. Retrieved February 9, 2006 at http://www.psu.edu/president/pia/planning_research/reports/index.htm

Penn State (2006). Penn State fact book. University Budget Office. Retrieved on February 9, 2006 at <http://www.budget.psu.edu/FactBook/>

Rice, R.E. (March/April 2004). The future of the American faculty: An interview with Martin J. Finkelstein and Jack H. Schuster. *Change*, pp. 26-35.

Robinson, J. (February 10, 1999). Casper discusses hiring, promotion. *Stanford Online Report*. Retrieved on April 14, 2003 at <http://news-service.stanford.edu/news>

The devaluing of higher education. (March-April 2006). *Academe*, 92(2), pp. 23-105.

Table 1. Tracking Cohorts Entering the Tenure-Track through Seven Years – Penn State

Cohort Year	All Entrants			Female			Male			Minority			Non-Minority		
	Entrants	Tenured	Rate	Entrants	Tenured	Rate	Entrants	Tenured	Rate	Entrants	Tenured	Rate	Entrants	Tenured	Rate
1990	121	70	58%	40	19	48%	81	51	63%	18	9	50%	103	61	59%
1991	93	55	59%	30	15	50%	63	40	63%	8	5	63%	85	50	59%
1992	151	89	59%	55	28	51%	96	61	64%	29	15	52%	122	74	61%
1993	103	55	53%	31	12	39%	72	43	60%	17	8	47%	86	47	55%
1994	134	63	47%	50	17	34%	84	46	55%	21	6	29%	113	57	50%
1995	127	70	55%	53	30	57%	74	40	54%	23	17	74%	104	53	51%
1996	91	45	49%	29	12	41%	62	33	53%	22	12	55%	69	33	48%
1997	160	87	54%	52	25	48%	108	62	57%	28	15	55%	132	72	55%
1998	183	107	58%	75	38	51%	108	69	64%	44	21	49%	139	86	62%
Totals	1163	641	55%	415	196	47%	748	445	59%	210	108	51%	953	533	56%

Each cohort in Table 1 includes new entrants into provisional status. So, for example, ABDs hired initially into a fixed - term position are included in a tenure cohort for the year in which they formally entered the tenure track. The cohorts also include library faculty (who have academic appointments at Penn State) of equivalent rank. Table 1 tracks cohorts *through* the seventh year – that is, one year past the normal tenure-decision point. This accounts for individuals who temporarily “stopped the clock” for one year (for example, for medical reasons). Typically there are 6 to 12 such individuals, University-wide, in any year’s cohort

**Table 2. Tenure Achievement Rates From Selected Association of American Universities Institutions
1997-98 Tenure Track Entrants Achievement of Tenure by 2004-05**

University	All Entrants			Female Entrants			Male Entrants			Minority			Non-Minority		
	Entrants	Tenured	Rate	Entrants	Tenured	Rate	Entrants	Tenured	Rate	Entrants	Tenured	Rate	Entrants	Tenured	Rate
A	87	29	33%	34	9	26%	53	20	38%	7	4	57%	80	25	31%
B *	62	29	47%	26	10	38%	34	19	56%	9	3	33%	53	26	49%
C	129	62	48%	41	18	44%	88	44	50%	26	14	54%	103	48	47%
D	89	43	48%	36	16	44%	53	27	51%	28	11	39%	61	32	52%
E	61	32	52%	29	13	45%	32	19	59%	17	8	47%	44	24	55%
F	160	87	54%	52	25	48%	108	62	57%	28	15	54%	132	72	55%
G	40	22	55%	18	10	56%	22	12	55%	7	5	71%	33	17	52%
H **	630	352	56%	236	123	52%	394	229	58%						
I	41	25	61%												
J	83	56	67%	38	23	61%	45	33	73%	16	7	44%	67	49	73%
All	1382	737	53%	510	247	48%	829	465	56%	138	67	49%	573	293	51%

* Gender figures do not add to total because two are "Unknown".

** Includes tenure-track entrants between 1986-1991 and tenure achievement through 8 years.

Unless otherwise noted, Table 2 data are for a seven-year period, beginning at the time an individual first enters provisional tenure status, are for main campuses only, and exclude medical school faculty.

**Table 3. Second, Fourth, and Sixth-Year Tenure Decisions, 2004-05 – Penn State
College Level Reviews & Recommendations**

	Total			Men			Women			Minority		
	2nd Year	4th Year	6th Year	2nd Year	4th Year	6th Year	2nd Year	4th Year	6th Year	2nd Year	4th Year	6th Year
a. # of cases reviewed	113	140	107	63	86	60	50	54	47	24	33	20
b. # with continuation recommended	109	121	95	61	75	54	48	46	41	24	27	15
c. # forwarded for early tenure (subset of line b)	5	13	n/a	3	9	n/a	2	4	n/a	1	4	n/a
% with "positive" recommendations	96%	86%	89%	97%	87%	90%	96%	85%	87%	100%	82%	75%

Data in Table 3 include Penn State's Milton S. Hershey College of Medicine, but exclude Penn College of Technology and Dickinson School of Law.