UNIVERSITY OF CALIFORNIA, ACADEMIC SENATE

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University of California
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August 2, 2005

**M.R.C. GREENWOOD, PROVOST AND SENIOR VICE PRESIDENT
ACADEMIC AFFAIRS**

Re: UCAP Report on Passing the Step VI Barrier

Dear M.R.C.:

On behalf of the Academic Council, I am pleased to forward the enclosed University Committee on Academic Personnel (UCAP) Report on Passing the Step VI Barrier. The report was prepared by UCAP as a result of concerns raised in the 2004 Report of the Professorial Step System Task Force of possible bias or other impediments in the advancements of women and non-Asian minorities to Professor Step VI and higher, and the differential frequency of advancements to Step VI among the campuses for all faculty.

In its study, UCAP found that the evidence did not support the hypothesis that either women or under-represented minorities were disadvantaged in advancing to Step VI, although small differences might not have been detectable. However, UCAP did find considerable differences among the campuses in the frequency of their faculty's advancement to Step VI. (It is the hope of the Academic Council that the revised APM criteria for advancement to Step VI and Above Scale, which I recently submitted to you, will lessen these disparities.)

In endorsing this report, the Academic Council strongly supports UCAP's recommendation that the systemwide collection of data on faculty personnel actions for longitudinal analysis be continued, and that similar studies of other faculty cohorts be conducted.

As you are aware, these efforts will require the systemwide administration commit to providing the necessary resources to allow for collecting, compiling, and analyzing the appropriate personnel data. The Academic Council urges you to make such resources available so that these important studies may be continued and expanded. Please let me know whether your office will continue to support this effort.

Best regards,

George Blumenthal, Chair
Academic Council

Encl.:   UCAP Report on Passing the Step VI Barrier

Copy: Alan Barbour, UCAP Chair
            Academic Council
            María Bertero-Barceló, Executive Director

GB/bm

UNIVERSITY COMMITTEE ON ACADEMIC PERSONNEL (UCAP)
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July 7, 2005

GEORGE BLUMENTHAL, CHAIR
ACADEMIC COUNCIL

Re: UCAP Report on Passing the Step VI Barrier

Dear George,

Please find attached UCAP's report on faculty career advancement at the Step VI barrier. The members of UCAP unanimously endorse the conclusions and recommendations outlined in the report. In addition, members of UCAAD were given the opportunity to review a draft, and their comments were taken in account for the final version.

UCAP looks forward to reviewing comments from Senate committees and Divisions and offering consultation to the Office of Academic Advancement in further study of this issue, in collaboration with UCAAD and other senate committees. As we note in the report, we see the study as the beginning of a process, which over time will provide a more complete understanding of faculty experiences in the academic personnel system. As such, it will be important to update and extend the study as Systemwide data about additional faculty cohorts and other critical academic personnel actions becomes available. As noted in the report, this will require the commitment of resources, including expansion and maintenance of the database, as well as statistical expertise or consultation as needed.

Thank you for giving UCAP the opportunity to study this issue.

Sincerely,

Alan Barbour
Chair, UCAP

Enclosure

AB/ml

cc: UCAP Members
        Executive Director Bertero-Barceló

UCAP REPORT ON PASSING THE STEP VI BARRIER – JULY 7, 2005

BACKGROUND

Our survey was prompted by the "Report of the Professorial Step System Task Force" of March 24, 2004. The Academic Council-appointed Task Force was charged "to review the placement and number of special review or 'barrier' steps within the full professor ranks, with particular emphasis on the barrier review between Professor Step V and Professor Step VI". The Task Force reported that for system-wide data from both 1998 and 2003 there was not "an even distribution" of professors over Steps I through IX (or 1 through 9) and Above Scale and, specifically, that there was a "significant bulge" of professors at Step V. In 2003, for example, 16% of UC professors were at Step V instead of the 10% that would be expected by dividing up the total numbers of faculty at rank of Professor by the number of steps in this rank. One of the conclusions of the Task Force's report was that "Step VI had become a true barrier to advancement on many campuses rather than a means to stimulate improvement in faculty performance." The Task Force also concluded that "women and non-Asian minority groups are at a particular disadvantage in surmounting the barrier review for advancement to Step VI." This latter conclusion was based on a point-in-time examination of the distributions of faculty across the UC system (excluding UCSF) aged 51-60 among the different professorial steps by gender and ethnicity in 2003. These distributions were presented in the report as percentages alone without the actual numbers and were not accompanied by statistical analysis.

These shortcomings of the Report's analysis notwithstanding, the Task Force's conclusions appropriately raised concerns and, as a consequence, led to the Academic Council's request to UCAP to further study the barrier step, specifically with regard to the criteria for Step VI and the apparent "disadvantage" for women and non-Asian minorities in surmounting the Step VI barrier. In response to this request, UCAP first developed and reached consensus on revised language for the Academic Personnel Manual for the criteria for advancement to Step VI and to Above Scale; this proposal is now completing review. The present report deals with the issue of possible bias or other impediment in advancing to Step VI and higher. The examined variables included not only gender and ethnicity but also other possible determinants, e.g. campus, age, and discipline. Another conclusion of the 2004 Task Force was that "Step VI review guidelines are interpreted very differently across the UC campuses." This latter conclusion was based in part on the Task Force's finding that campuses (excluding UCSF) differed in the proportions of their professors at Step V and that the magnitude of the demographic bulge at Step V at each campus was associated with lengthier times served at this step.

METHODS

For this project UCAP worked collaboratively with UCOP, specifically with the Data Management and Analysis section of the Academic Advancement division. This OP unit has access to the system-wide data on all faculty at all campuses and compiles this into spreadsheet form as needed. We jointly decided that greater analytical power would be obtained by selecting a cohort of faculty at Step V, for which complete data were available, and then following-up on this group of faculty members after a selected interval, during which many of the members could be expected to have advanced to Step VI. We chose a 6-year interval and the years 1996-97 for entry and 2002-03 for follow-up, because of the completeness of the data for these years.

The database was restricted to regular rank series faculty at each of the 9 campuses, including UCSF. Names, social security numbers, addresses, employee numbers, and other personal identifiers were removed from the database prior to UCAP's access. The initial population included 1022 faculty members who were listed as Professor Step V in either 1996 or 1997 and without duplication. Of these, 46 (4.5%) were excluded, because their ranks and steps at entry could not be confirmed after cross-referencing the records. For some analyses cases were assigned to these age groups: 35-44, 45-49, 50-54, 55-59, and ≥ 60. The following characteristics of the cohort were recorded: campus, gender, ethnicity

(designated as "American Indian", "Asian", "Black", "Hispanic", and "White"), discipline, age at entry in 1996 or 1997, years of service as of 1996 or 1997, years at rank, years at step, presence 6 years later, and step if still present at follow-up. Above Scale was coded as step "10" for this analysis. For some faculty the year of highest degree was recorded but not in sufficient frequency across the database to be useful for this analysis. Statistical analysis was performed by UCAP members using StatXact and LogXact v. 6 (Cytel Software), SPSS v. 13 (SPSS, Inc.), and SYSTAT v. 11 (SYSSTAT Software). A p value of < 0.05 was considered "statistically significant."

RESULTS
Description of the cohort at entry. The 1996-97 cohort of UC regular rank series faculty at Professor Step V numbered 976 individuals and comprised 835 (86%) men and 141 (14%) women. The distribution by campus was the following: Berkeley, 170; Davis, 177; Irvine, 94; Los Angeles, 169; Riverside, 43; San Diego, 111; San Francisco, 54; Santa Barbara, 94; and Santa Cruz, 64. According to the records in the database, there were the following ethnic designations: 861 (88%) White, 58 (6%) Asian, 35 (4%) Hispanic, 20 (2%) Black, and 2 (0.2%) American Indian. For some analyses, the non-White designations were combined for a total minority grouping (12% of total). In other analyses, the Hispanic, Black, and American Indian designations were combined for an under-represented minority (URM) group (5% of the total) and compared to a combined White and Asian group. By clusters of disciplines or departments, 165 (17%) of the faculty in the cohort were in the arts or humanities; 273 (28%) were in social sciences, law, education, business, or related studies; 329 (34%) were in biological or health sciences; and 209 (21%) were in physical sciences, engineering, computer sciences, or mathematics. The mean (and standard deviation) age of the cohort was 53.6 (6.1) years, and the median age was 54. These values were similar to what the Task Force found for 1999: mean of 55 and median of 56. The figure below shows the distribution of the cohort members' ages. The mean ages between by gender, ethnicity group, campus, or discipline cluster were not statistically different (Appendix). The average length of UC faculty service was 19.5 (8.5) years. The average number of years at rank and step were 7.4 (1.8) and 2.8 (2.4), respectively.
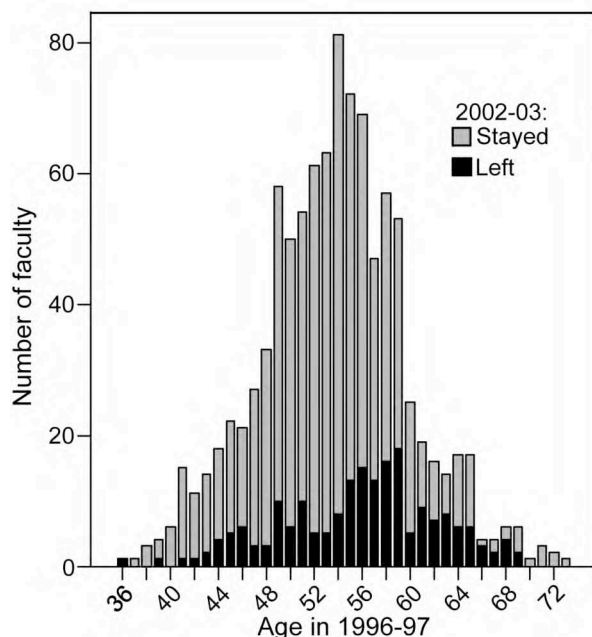
The cohort at follow-up. Of the number at entry in either 1996 or 1997, 778 (80%) were still faculty members in the UC system 6 years later (see figure below). Those who stayed either remained at Step V or attained Steps VI, VII, VIII, IX or Above Scale. The focus of this study was not on possible determinants of departure from the University, and, consequently, there was not an attempt to ascertain reasons for separation, such as retirement, death, disability, care-giving, or acceptance of another position. But leaving

aside causes, analysis of the data in hand did not reveal statistically significant difference between campuses, genders, or discipline clusters in the proportions that left the university (Appendix Table 1). There was, not surprisingly, an association between age at entry and the likelihood of departure from the university by the time of follow-up. This is shown in the figure above of the distribution of ages for those who left and those who stayed. Of the 433 faculty age ≥ 50 at entry, 127 (29%) had left before follow-up 6 years later, while only 71 (13%) of the 543 faculty age < 50 had departed. Those who left had a mean of 21 years of service in the UC system, while those who stayed had a mean of 19 years of service, an indication that retirement accounted for separation in several cases.
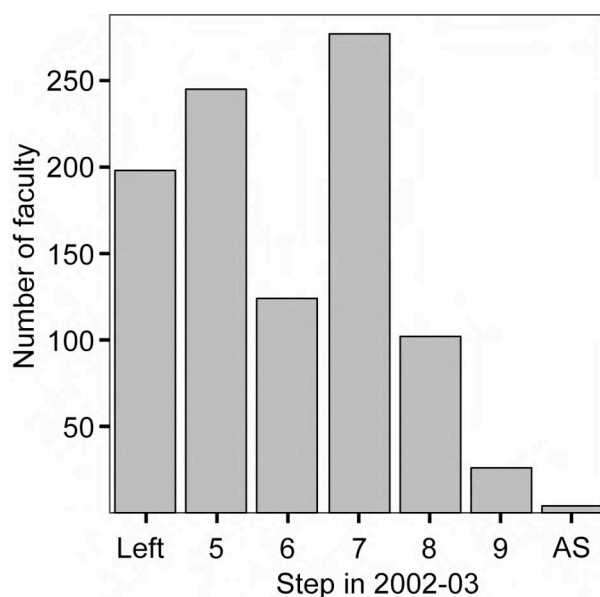

There was a tendency for minority faculty members to leave the University in greater proportion than their other colleagues (Appendix Table 1). Of the 861 White faculty members at entry, 695 (81%) were still present. This compares to 83 (72%) of 115 minority faculty members in total ($p = 0.05$) and 40 (70%) of 57 URM faculty members ($p = 0.09$). Taking into account age, discipline, or campus did not explain the differences in retention. But the samples sizes for these sub-groups were small, and the power of the study was such that only gross differences in departure rates would be detectable at a confidence level of 95% or more.

Crossing the barrier step. Overall, 533 (69%) of 778 faculty achieved Step VI or higher by the time of follow-up 6 years later. The figure above shows the distribution of faculty by step at follow-up. While lacking numbers of faculty at Professor Steps I through IV in 2002-03, the figure is consistent with the "bulge" at Step V reported by the Task Force. Excepting Step V, the distribution of faculty by step approximated a normal curve. With the aim of identifying possible determinants of this distribution, statistical analysis of the different characteristics of the cohort's members was carried out using both linear and logistic regression, as well as non-parametric measures, such as the Chi-square and likelihood ratio tests. The results are summarized here; more detailed presentations of the analyses are included in Appendix Table 1 and Table 2.

Of the different variables under study, the characteristic with the greatest strength of association with advancement to Step VI or higher was age. In general, the younger the faculty member at entry, the higher the step at follow-up. For this population, the following model approximates the relationship: step = 11.5 – age/10. As examples, the predicted step for a faculty member aged 61 years at entry would be 5 according to this model, and the corresponding step prediction for someone who was 42 is 7. The figure below shows the relationship between age and step in another way. The odds that a faculty member in the

35-44 age group at entry would advance beyond Step V within 6 years was about fifty-fold greater than for someone who was in the ≥ 60 group in 1996-97 (Appendix Table 2). Age groups falling between the youngest and oldest had correspondingly intermediate likelihoods of advancement.
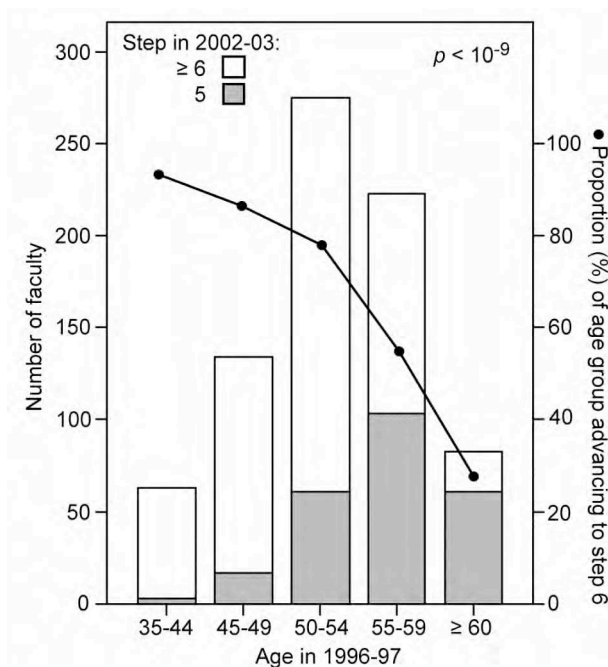

A lower frequency of advancement with greater age was observed for both men and women, for different ethnicities, for different academic disciplines, and for different campuses. The apparent age effect was also seen when the sample was limited to the 647 members of the cohort who had at least 10 years of UC service. To determine if the age effect was solely or largely attributable to a lower success in passing the Step VI barrier, the relationship between age and achieved step was examined for the 533 faculty who advanced past Step V. Even among this group at step ≥ 6 (VI), the association between age and further merit increases was negative and statistically significant.

One possible interpretation of these results is that there was bias against older aged faculty at the instance of the barrier step action. While a pervasive age discrimination cannot be entirely ruled out, a more plausible explanation is that faculty members tend to differ in their rates of ascension through ranks and steps over the courses of their academic careers, and that the association of lower step at follow-up with greater age reflected the cumulative effects of these different rates. If the latter was the case, then one would expect an association between the years that a faculty member had been at Step V by the time of entry and their age. In other words, there would be evidence of the same pace of rank/step advancement before 1996-97 as well as after. Indeed, there was a strong positive association between age and the number of years a faculty member had been at Step V. A rough representation of this relationship is given by this model: "years-at-step" = age/5 – 7. Because age and "years-at-step" co-varied, addition of the second variable to the first predictive model, which specified age only, provided little additional discrimination.

While the association between age and step was noted for all divisions of the University, individual campuses did significantly differ from each other in an age-independent way in the proportions of their faculties that passed the barrier from Step V to VI. The accompanying figure shows that the frequency of success at this action ranged from 48% at Santa Cruz to 83% at San Diego. The overall proportion of faculty that advanced was 73% for a group comprising Berkeley, Davis, Los Angeles, San Diego, and San Francisco, and 59% for the combined data for Irvine, Riverside, Santa Barbara, and Santa Cruz. The

probability that this or a more extreme distribution could have arisen randomly was 1 out of 5,000. These findings are consistent with the report of the Task Force, which used 2003 data.
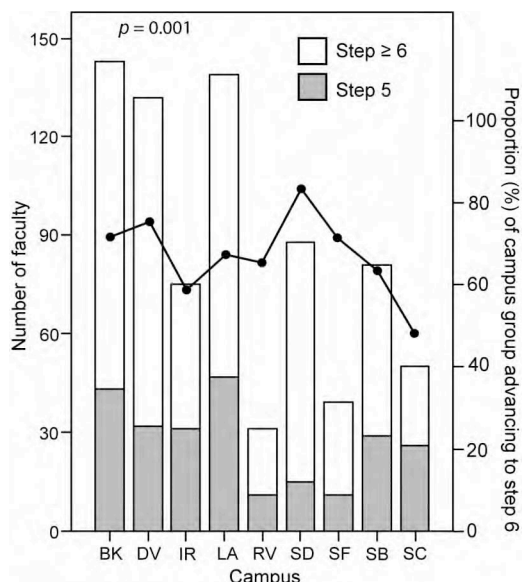
The database had several possible designations for the disciplines of cohort members; these included a general academic area, like biology, as well as professional schools and programs. For purposes of this analysis they were clustered into four major groups, as described above. The proportions of faculty in each discipline cluster that advanced to Step VI or higher were approximately the same and did not significantly differ: 68% of 127 in arts and humanities; 67% of 225 in the social sciences, law, education, or related fields; 72% of 250 in biological or health sciences; and 66% of 176 in physical sciences, engineering, computer sciences, or mathematics. There was a trend for Step V faculty in the physical sciences and mathematics in 1996-97 to be younger than their counterparts in other disciplines.
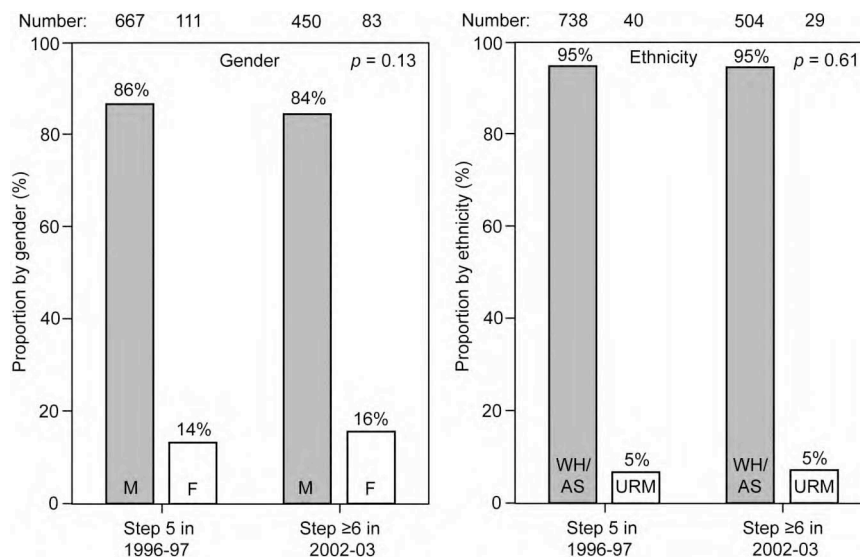
Analysis of this cohort of UC faculty did not support the hypothesis that gender and ethnicity were determinants of advancement to Step VI or higher. The proportions of men and women at Step V in 1996-97 and at Step VI or higher in 2002-03 are shown in the left panel of the above figure. Similar data are shown for White or Asian (non-URM) faculty in comparison to URM faculty in the right panel. A caution for

interpretation of the results is that the sample sizes for women or, in particular, URM were several-fold smaller than the sample sizes for men or non-URM faculty, thus obviating detection of any true differences of a small degree between genders or ethnicity groups. The sample sizes would theoretically have allowed detection (at a significance level of 0.05 and with a power of 0.80) of a ≥ 19% relative difference between sexes or a ≥ 23% difference between White and minority ethnic groups for that personnel action.

As another approach, we randomly matched two male faculty members to every female faculty member or three non-URM faculty or every URM faculty member by age group, campus group, and academic discipline group, thus controlling for those variables. There was not a significant difference between the proportions of the matched groups in advancement past the barrier. For instance, the 40 URM faculty who stayed were randomly matched with 120 non-URM of the same age group, campus group, and discipline group: 29 (73%) of the URM faculty advanced to Step VI or higher, and 90 (75%) of the matched White/Asian faculty advanced (p = 0.8).

CONCLUSIONS
(1) Policy-making and decision-making about the academic personnel process in the University are best served by the collection of comprehensive data from across the system and submission of this data to rigorous descriptive and statistical analysis.
(2) However, further extension of data collection and subsequent system-wide comparisons of campuses and demographic groups may be viewed by some as unwarranted and possibly intrusive. Thus, the rationale and possible benefits of such surveys for overall faculty welfare and equity should be clearly articulated, and safeguards should be in place for preserving confidentiality.
(3) The findings for this cohort suggest that the University may be losing minority faculty members at a greater rate than their White counterparts at the Professor rank.
(4) In contrast to the findings of the 2004 Task Force, the present retrospective, longitudinal study did not find evidence of an overall disadvantage for either women or under-represented minorities in advancing to Step VI. On the other hand, the small sample sizes of women and URM faculty in the cohort might have precluded detection of small differences in success in advancing past the barrier.
(5) In confirmation of the Task Force's finding, there were considerable differences across the system between campuses in the frequency of advancement to Step VI for their faculties.
(6) For both passage of the barrier and for the overall pace of advancement, the variable with the greatest strength of association was age: the younger the faculty member in the cohort, the more likely the passage to Step VI and to higher steps.
(7) The insights provided by the database and its analysis encourage extension of such studies to additional faculty cohorts at Step V and to other critical academic personnel actions, such as promotion to Associate Professor with tenure and promotion to Professor. With expectation of increased representation of women and minority faculty members in faculty cohorts of more recent hires, there may finer detection of disadvantages, if indeed present, in achieving tenure or other promotions.

RECOMMENDATIONS
(1) Continue the system-wide data collection of data faculty personnel actions for longitudinal analysis and for better assessment of rates of academic progress, which is preferable to static "snap shots" of a particular period. Studies similar to the one reported here will require the commitment of resources for data gathering, compilation of the data into a database, statistical analysis, and generation and distribution of reports.
(2) Carry out a similar study of younger cohorts of faculty, who would be entered at the time of their appointment as an assistant professor and then assessed 6-7 years later with regard to achieving tenure.

(3) Determine in more detail why faculty members are leaving the system and include this data in the faculty database. The reasons recorded could include at minimum: retirement, death, disability, departure for another position, lack of advancement, child-rearing, and/or care-giving.

(4) Routinely include year of highest degree for faculty members in the database. This would provide a possible substitute for age in cases where a faculty member has delayed or suspended an academic career for various reasons, including child-bearing and –rearing.

(5) Include other Academic Senate series, such as Professor-in-Residence, as well as non-Academic Senate series in the data collection and analysis.

(6) Further evaluate the negative age effect identified here. One question is whether the slower rate of advancement of some faculty in the Professor rank corresponds to the pace earlier in their careers, and, if so, whether more attentive academic mentoring—sooner rather than later--would be of benefit.

(7) For greater faculty equity across the system in the academic personnel process, divisional CAP's and administrations should periodically recalibrate the actual practices on their campuses for such major actions as Step VI, in comparison to other campuses.

APPENDIX Table 1.
Likelihood ratios (LR) and odds ratios (OR) with 95% CI for staying at the UC and for advancing to Professor step VI (6) or higher at 2002-03 follow-up for 1996-97 cohort of faculty at Professor step 5 by campus, discipline, gender, ethnicity, and age

		Totals	Stayed	Left	% Stayed	LR	p	OR (Stayed)	Step ≥6	Step 5	% ≥6	LR	p	OR (≥6)
Campus	BK	170	143	27	84%	11.5	0.21		100	43	70%	26.7	0.0009	
	DV	177	132	45	75%				100	32	76%			
	IR	94	75	19	80%				44	31	59%			
	LA	169	139	30	82%				92	47	66%			
	RV	43	31	12	72%				20	11	65%			
	SD	111	88	23	79%				73	15	83%			
	SF	54	39	15	72%				28	11	72%			
	SB	94	81	13	86%				52	29	64%			
	SC	64	50	14	78%				24	26	48%			
	BK, DV, LA, SD, SF	681	541	140	79%	0.1	0.75	1.0	393	148	73%	13.8	0.0002	1.9 (1.3-2.6)
	IR, RV, SB, SC	295	237	58	80%			1.1 (0.7-1.5)	140	97	59%			1.0
Discipline	A & H	165	127	38	77%	7.5	0.06		86	41	68%	1.7	0.72	
	SS, L, Ed	273	225	48	82%				151	74	67%			
	BS & HS	329	250	79	76%				179	71	72%			
	PS, En, CS, M	209	176	33	84%				117	59	66%			
	BS, HS, PS, En, CS, M	538	426	112	79%	0.2	0.69	1.0	296	130	69%	0.4	0.54	1.1 (0.8-1.5)
	A & H, SS, L, Ed	438	352	86	80%			1.1 (0.8-1.5)	237	115	67%			1.0
Gender	Female	141	111	30	79%	0.1	0.75	1.0	83	28	75%	2.4	0.13	1.1 (0.7-1.7)
	Male	835	667	168	80%			1.1 (0.7-1.7)	450	217	67%			1.0
Ethnicity	WH	861	695	166	81%	4.3	0.05	1.0	478	217	69%	0.2	0.71	1.0
	AS, HI, BL, IN	115	83	32	72%			0.6 (0.4-1.0)	55	28	66%			0.9 (0.5-1.4)
	WH, AS	919	738	181	80%	3.1	0.09	1.0	504	234	68%	0.3	0.61	1.0
	HI, BL, IN	57	40	17	70%			0.6 (0.3-1.1)	29	11	73%			1.2 (0.6-2.8)
Age	35-44	73	63	10	86%	50.2	7E-10		60	3	95%	148.4	9E-10	
	44-49	161	134	27	83%				117	17	87%			
	50-54	309	275	34	89%				214	61	78%			
	54-59	298	223	75	75%				120	103	54%			
	≥60	135	83	52	61%				22	61	27%			
	≥50	433	306	127	71%	39.3	6E-10	1.0	142	164	46%	114.0	3E-26	1.0
	≤49	543	472	71	87%			2.8 (2.0-3.9)	391	81	83%			5.6 (4.0-7.9)
	Totals	976	778	198	80%				533	245	69%			

Discipline: Arts & Humanities (A & H), Social Sciences (SS), Law and other professional (L), Education (Ed), Biological Sciences (BS), Health Sciences (HS), Physical Sciences (PS), Engineering (En), Computer Science (CS), and Mathematics (M). Ethnicity: White (WH), Asian (AS), Hispanic (HI), Black (BL), and American Indian (IN). p values (*p*) are 2-tailed. 95% confidence intervals of OR are given in parentheses. SPSS v. 13 (SPSS, Inc.) and StatXact v. 6 (Cytel Software Corp.)

APPENDIX Table 2. Logistic regression analysis

Gender, ethnicity, discipline, campus, and age (binary):

	Estimate	S.E.	t-ratio	p-value	OR	Upper	Lower
CONSTANT	−0.675	0.200	−3.378				
GENDER	0.281	0.270	1.042	0.298	1.33	2.25	0.78
ETHNICITY 1	−0.264	0.355	−0.742	0.458	0.77	1.54	0.38
ETHNICITY 2	0.410	0.540	0.760	0.448	1.51	4.34	0.52
DISCIPLINE	0.036	0.179	0.199	0.842	1.04	1.47	0.73
CAMPUS	0.702	0.183	3.827	<0.001	2.02	2.89	1.41
AGE	1.736	0.171	10.176	<0.001	5.67	7.92	4.06

GENDER: Male = 0; Female = 1
ETHNICITY 1: White = 0; Asian, Hispanic, Black, or American Indian = 1
ETHNICITY 2: White or Asian = 0; Hispanic, Black, or American Indian = 1
DISCIPLINE: Biological Sciences (BS), Health Sciences (HS), Physical Sciences (PS), Engineering (En), Computer Science (CS), and Mathematics (M) = 0; Arts or Humanities (A & H), Social Sciences and other (SS), Law (L), and Education (Ed) = 1
CAMPUS: Irvine (IR), Riverside (RV), Santa Barbara (SB), and Santa Cruz (SC) = 0; Berkeley (BK), Davis (DV), Los Angeles (LA), San Diego (SD), and San Francisco (SF) = 1
AGE: ≥50 years = 0; 35–49 years = 1
Odds Ratio (OR) with upper & lower 95% confidence limits; Standard error (S.E.)
Log Likelihood = LL(N) = −419.13; Log Likelihood of constants only model = LL(0) = −484.67; $2*[LL(N)-LL(0)]$ = 131.09 with 6 df Chi-sq; p-value = 0.000; McFadden's Rho-Squared (R^2) = 0.135

Campus and age (binary):

	Estimate	S.E.	t-ratio	p-value	OR	Upper	Lower
CONSTANT	−0.633	0.172	−3.673				
CAMPUS	0.700	0.179	3.904	<0.001	2.01	2.86	1.42
AGE	1.752	0.170	10.285	<0.001	5.77	8.05	4.13

LL(N) = −420.06; LL(0) = −484.67; $2*[LL(N)-LL(0)]$ = 129.22 (2 df); p = 0.000; R^2 = 0.133

Discipline:

	Estimate	S.E.	t-ratio	p-value	OR	Upper	Lower
CONSTANT	0.685	0.160	4.288				
A & H	0.056	0.248	0.226	0.821	1.06	1.72	0.65
SS, Ed, L	0.029	0.214	0.134	0.894	1.03	1.56	0.68
HS, BS	0.240	0.213	1.130	0.259	1.27	1.93	0.84
PS, En, CS, M					1.00		

LL(N) = −483.82; LL(0) = −484.67; $2*[LL(N)-LL(0)]$ = 1.70 (3 df) p = 0.637; R^2 = 0.002

Campus:

	Estimate	S.E.	t-ratio	p-value	OR	Upper	Lower
CONSTANT	−0.080	0.283	−0.283				
BK	0.924	0.337	2.744	0.006	2.52	4.87	1.30
DV	1.219	0.348	3.500	<0.001	3.39	6.70	1.71
IR	0.430	0.368	1.170	0.242	1.54	3.16	0.75
LA	0.752	0.335	2.243	0.025	2.12	4.09	1.10
RV	0.678	0.470	1.442	0.149	1.97	4.95	0.78
SD	1.662	0.401	4.150	<0.001	5.27	11.56	2.40
SF	1.014	0.455	2.231	0.026	2.76	6.72	1.13
SB	0.664	0.366	1.815	0.070	1.94	3.98	0.95
SC					1.00		

LL(N) = −471.33; LL(0) = −484.67; $2*[LL(N)-LL(0)]$ = 26.69 (8 df); p = 0.001; R^2 = 0.028

Age group:

	Estimate	S.E.	t-ratio	p-value	OR	Upper	Lower
CONSTANT	−1.020	0.249	−4.101				
35–44	4.016	0.642	6.257	<0.001	55.46	195.07	15.76
45–49	2.949	0.359	8.203	<0.001	19.08	38.60	9.43
50–54	2.275	0.288	7.900	<0.001	9.73	17.10	5.53
55–59	1.173	0.283	4.149	<0.001	3.23	5.62	1.86
≥ 60					1.00		

LL(N) = −410.483; LL(0) = −484.67; $2*[LL(N)-LL(0)]$ = 148.38 (4 df); p = 0.000; R^2 = 0.153