AN ANALYSIS OF FACULTY GENDER EQUITY ISSUES AT EMORY UNIVERSITY

Prepared for the PCSW Faculty Concerns Committee
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In light of the negative findings MIT and other research universities were releasing at the time, in spring 2000 the President's Commission on the Status of Women (PCSW) saw the need for studying faculty gender equity issues on this campus. At the PCSW's request, the Office of Institutional Research completed an analysis on faculty gender equity at Emory. The analysis is divided into three parts. The first section discusses the representation and hiring of women faculty at various professorial ranks, tenure rates and promotion to professor by gender, and representation of women in leadership roles and among holders of endowed professorships. The second part analyzes faculty attrition by gender. The last part discusses the results of a salary equity analysis conducted on the cohort of 2000-01 tenured and tenure track non-medical faculty.

I. Female Representation on Emory Faculty

From 1991 to 2000, the percentage of women on the regular full-time teaching faculty[1] at Emory increased from 26 percent to 29 percent. Table 1 shows female representation by school and rank for three years: 1991-92, 1995-96, and 2000-01. Overall, the biggest gain in female representation is at the associate rank (from 19 percent to 27 percent).

Table 1. Female Representation among Emory Faculty: 1991-92, 1995-96, 2000-01

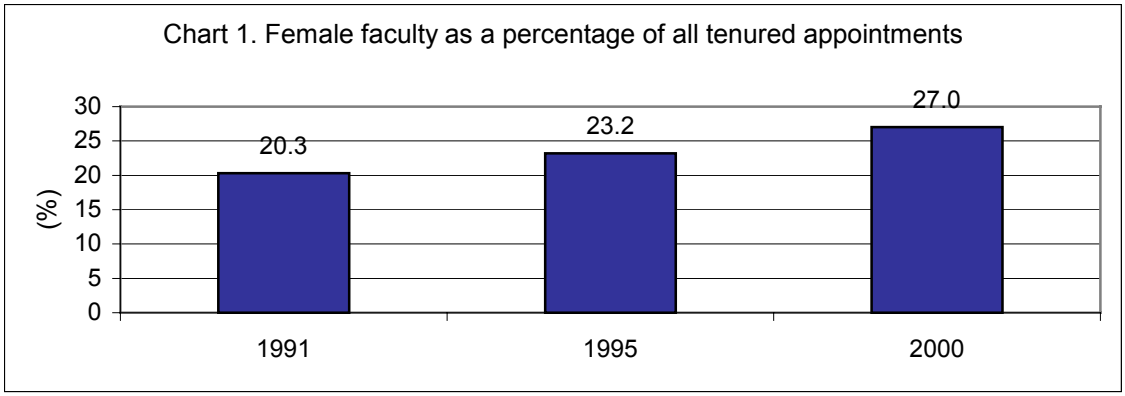
	Professor			Associate			Assistant			All Ranks		
	1991-92	1995-96	2000-01	1991-92	1995-96	2000-01	1991-92	1995-96	2000-01	1991-92	1995-96	2000-01
Arts and Sciences	14%	14%	15%	22%	34%	40%	45%	40%	42%	25%	28%	31%
Business	0%	20%	20%	14%	8%	14%	15%	21%	25%	11%	20%	20%
Law	5%	4%	21%	50%	67%	17%	75%	38%	50%	23%	22%	26%
Medicine	6%	8%	11%	10%	18%	17%	32%	30%	34%	23%	24%	27%
Nursing	100%	100%	100%	100%	92%	100%	100%	93%	100%	100%	93%	100%
Oxford	14%	20%	29%	35%	35%	38%	44%	45%	67%	33%	33%	43%
Public Health	25%	14%	13%	0%	48%	52%	62%	67%	56%	38%	45%	36%
Theology	5%	14%	24%	36%	13%	10%	29%	25%	50%	18%	18%	28%
University	11%	12%	15%	19%	27%	27%	37%	33%	36%	26%	27%	29%

Female faculty are least represented at the professor level; only 15 percent of all professors are women. The Institutional Research faculty database does not track part time faculty, but according to the 2000 EOP Report, the highest concentration of females within the ranks continues to occur in the junior ranks at the Lecturer (62 percent) and Instructor (54 percent) levels.

Over the past ten years, most schools showed an increase in the percentage of women. The representation of women on the full-time faculty is lowest in Business (20 percent) and highest in Nursing (100 percent).

Similar improvements occurred in the proportion of women faculty in total tenured appointments (see Chart 1).

[1] Includes tenure-track and non tenure-track appointments.



Women now constitute 27 percent of the tenured faculty at Emory. Since 1991, the proportion of women holding tenured appointments has increased 7 percentage points while the corresponding increase in the total female faculty has been 3 percentage points.

Compared to other private research universities, Emory ranks favorably in terms of the percentage of female faculty who are tenured (62 percent). The data in Table 2 are based on the IPEDS faculty and staff survey and excludes medical faculty. In a group of 15 private research universities, Emory ranks third --following Duke and University of Pennsylvania--in terms of the proportion of tenured faculty in total women faculty. Emory ranks second in the percentage of women in total tenured faculty, following Georgetown.

Table 2. Tenured Women at Peer Universities, 1999-2000

University	Tenured Women as a Percentage of Total Women Faculty	University	Tenured Women as a Percentage of Total Tenured Faculty
Duke	65%	Georgetown	28%
University of Pennsylvania	63%	**Emory**	25%
Emory	62%	Brown	23%
Brown	61%	Washington University	19%
Washington University	61%	Duke	19%
Stanford	60%	Columbia	19%
Northwestern	53%	University of Chicago	18%
Georgetown	50%	Northwestern	18%
University of Chicago	49%	University of Pennsylvania	18%
Princeton	47%	Princeton	17%
Vanderbilt	43%	Vanderbilt	17%
Yale	40%	Stanford	16%
Columbia	40%	Yale	15%
Johns Hopkins	18%	Johns Hopkins	12%

Source: IPEDS Peer Analysis System.

The overall proportion of women on the School of Medicine faculty at Emory is comparable to that at other private medical schools (see Table 3). The percentages of women who are full professors or tenured are somewhat lower than those at a majority of the peers.

Table 3. Representation of women among faculty at Emory School of Medicine and other private medical schools, 2000-01

School	% Faculty Who are Women	% Professors Who are Women	% Woman Who are Full Professors	% Tenured Faculty Who are Woman	% Women Who are Tenured
Stanford University	23%	12%	21%	16%	25%
USC	33%	16%	14%	16%	13%
Yale University	27%	15%	20%	14%	14%
Georgetown University	37%	8%	4%	14%	5%
Emory University	**30%**	**14%**	**7%**	**13%**	**8%**
Northwestern University	32%	16%	10%	18%	10%
Tulane University	29%	13%	13%	14%	15%
Boston University	33%	15%	11%	0%	0%
Harvard University	34%	11%	3%	10%	2%
Washington University	23%	7%	7%	9%	15%
Dartmouth Medical School	26%	9%	8%	13%	5%
Columbia University	35%	18%	12%	17%	7%
Cornell University	32%	16%	11%	18%	6%
New York University	29%	17%	16%	17%	23%
University of Rochester	28%	12%	8%	14%	8%
Duke University	28%	9%	6%	11%	11%
University of Pennsylvania	29%	12%	8%	13%	7%
Brown University	31%	16%	14%	28%	12%
Vanderbilt University	28%	12%	10%	12%	13%
2000 Peer Group Average	30%	13%	11%	14%	10%
2000 Average for All AAMC Schools	29%	13%	12%	15%	16%

Source: American Association of Medical Colleges.

New Appointments

If one examines all new faculty hires over the last three academic years, excluding School of Medicine, women made up 42 percent of that group (see Table 4). At senior academic ranks, however, the proportion of women hired was lower than the current representation of women in that group. At the associate professor level, only 26 percent of the new hires were women, compared to the 27 percent current representation at that rank. And at the professor level, 12 percent of the new hires were women, compared to the 15 percent current representation.

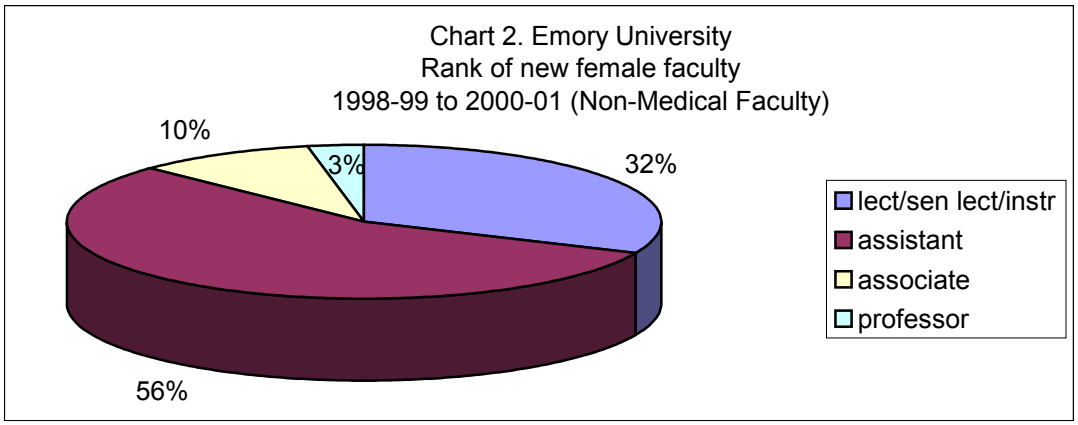
Table 4. New Faculty Appointments* by Gender, 1998-99 to 2000-01

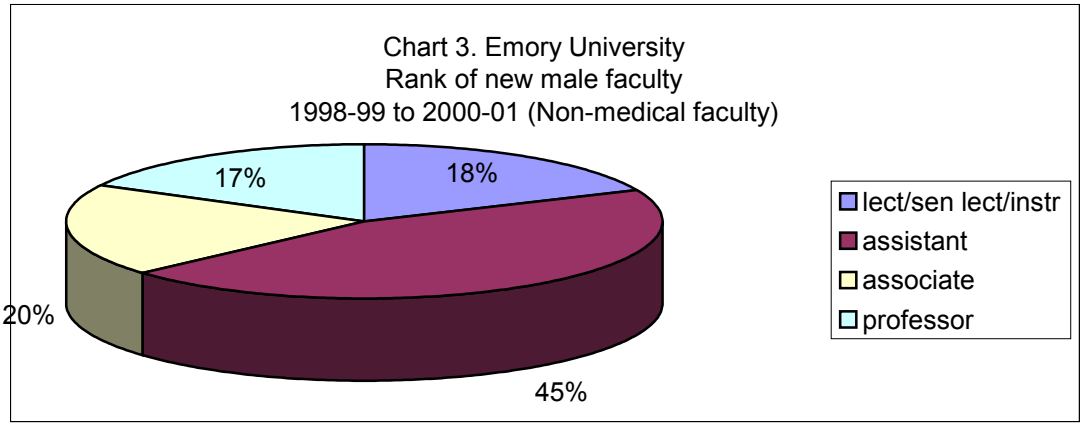
Rank	Female (N)	Male (N)	Total (N)	% Female
Lect/sen lect/instr	20	16	36	56%
Assistant	35	39	74	47%
Associate	6	17	23	26%
Professor	2	15	17	12%
Total	63	87	150	42%

**Excludes School of Medicine.*

Appendix A displays more information on the new faculty hires by school over the past three years. Notably, Rollins School of Public Health and Goizueta Business School were relatively successful in recruiting women at more senior ranks, with 33 percent and 55 percent, respectively, of the associate and full professors hired.

Charts 2 and 3 show the distribution by academic rank of new female and male faculty hired between 1998 and 2001. During this three-year period, women were hired in higher proportion than men at lower academic ranks.

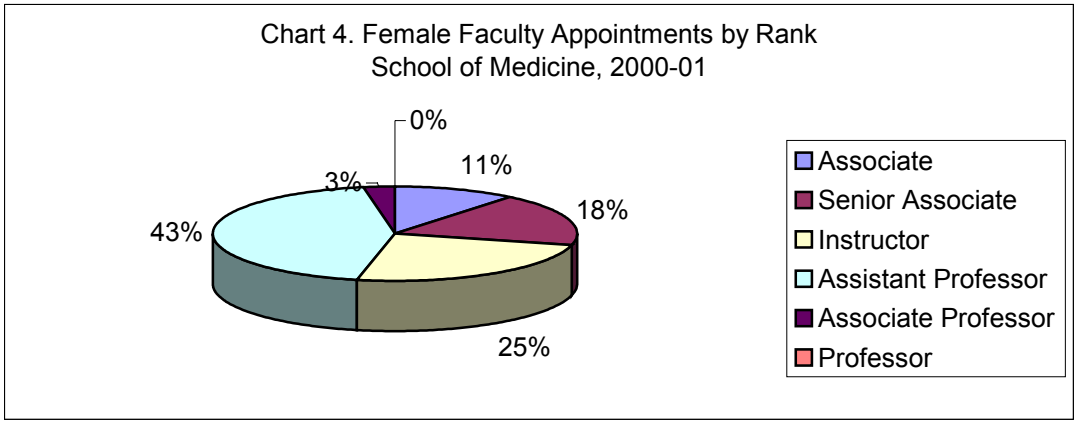


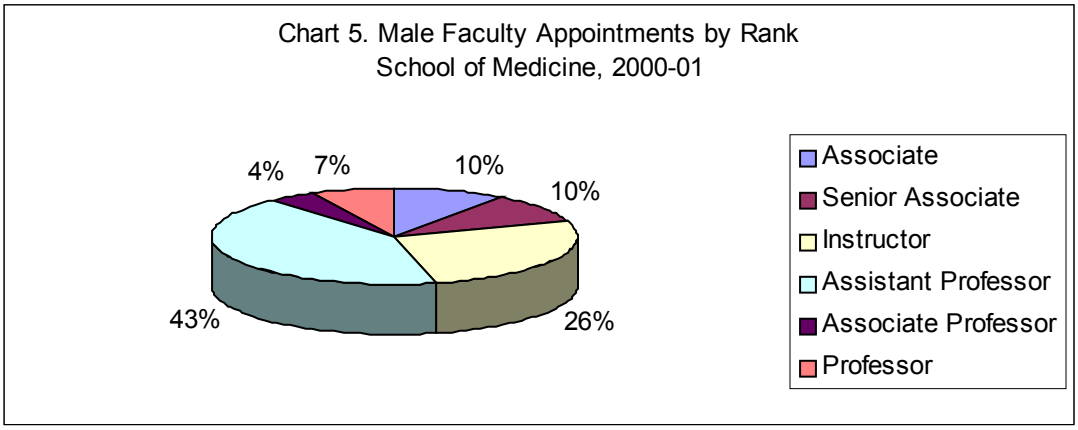


As Chart 2 reveals, only 13 percent of all newly hired female faculty entered at the associate or full professor level. Among the male hires, the corresponding proportion was 35 percent.

In School of Medicine, recent data on new hires reveal a similar situation (see Charts 4 and 5). Only 3 percent of newly hired female faculty entered at the associate professor level and 0 new

female full professors were hired. Among the male hires, the corresponding proportion was 4 at the Associate Professor level and 7 at Full Professor. The data seem to reflect the nation-wide scarcity of faculty at the full professor level. In addition, it may be that senior woman physicians are more reluctant to move geographically than their male counterparts.





Promotion and Tenure Rates

To track the career progress of new faculty, we grouped three yearly cohorts into one cohort--that of tenure-track assistant professors hired between 1991 and 1993. Grouping the yearly cohorts yields higher numbers of faculty, thus allowing for more meaningful comparisons. The group comprises all non-medical tenure track assistant professors hired in that period and includes those who were denied tenured or resigned for various reasons prior to tenure evaluation.

For the three-year cohort, the data indicate only a slight difference in the tenure rates for men and women (see Table 5). During this period, the university's overall tenure rate was approximately 50 percent, with the tenure rate for women being slightly lower than that for men (47.4 percent compared to 51.6 percent).

Table 5. Tenure Status for Assistant Professors Hired Between 1991 and 1993

	New Tenure Track Assistant Professors Hired 1991-1993	Tenured as of 2000	% Tenured as of 2000
Men	31	16	51.6%
Women	19	9	47.4%
Total	50	25	50.0%

Do women, on average, wait longer at the associate professor level than men before promotion to full professorship? To answer this question, we examined the career trajectories of all active full professors (excluding School of Medicine) who started at Emory as either assistant or associate professors. As Table 6 shows, the average time that women stay at the associate professor rank before being promoted to full professor is 0.7 years longer than that for men.

Table 6. Average time faculty remain at the associate professor rank before promotion to full professor

	Time (in years)	N
Female	7.2	20
Male	6.5	85

t=0.77, Prob>|T| = .4415

To test whether this difference is statistically significant, results were analyzed using an independent-samples t test. This analysis failed to reveal a significant difference between the two groups, t=0.77; p=.441.

Leadership

In recent years, there have been steady increases in the number of women department chairs. Of the 46 departments in arts and sciences, 16 or 35 percent are chaired by women, higher than the 32 percent overall representation for women in the total arts and sciences faculty. In the professional schools, of the 44 chairs and program directors, 10 or 27 percent are women. However, only four or 17 percent of the 24 current members of the Senate Faculty Council are women. Also, both the number and the percentage of women holders of endowed professorships are relatively low. Of the 172 distinguished chair holders at Emory, only 27 or 16 percent are women. This might be related to the low representation of woman at the full professor level.

II. Attrition Analysis

If one considers the cohort of tenure-track and tenured faculty who were hired over a five-year period --between August 31, 1989 and August 31, 1994-- and excludes the deceased, the overall attrition rate among female faculty is slightly higher than that for male faculty (41 percent versus 38 percent). As Table 6 shows, the relatively low number of new hires among women faculty does not allow one to draw sound conclusions for the professional schools. However, one can make relatively safe inferences for at least two schools: Emory College and the School of Medicine. In Emory College, women hired on tenure-track appointments or with tenure were

slightly more likely to be retained than their male colleagues. I In the School of Medicine, the attrition rate for tenured and tenure-track women faculty is higher than that for men (57 percent versus 46 percent).

Table 7. Status of faculty hired with tenure-track and tenured appointments between 8/31/89 and 8/31/94

	Active in 2001	On Leave in 2001	Left Emory by 2001	Starting Cohort	%Left
Business					
Female	2			2	0.0%
Male	12		3	15	20.0%
Emory College					
Female	26	2	10	38	26.3%
Male	51	1	21	73	28.8%
Law					
Female			3	3	100.0%
Male	3		1	4	25.0%
Medicine					
Female	12		16	28	57.1%
Male	76		66	142	46.5%
Oxford					
Female	1	1	1	3	33.3%
Male	4	1	1	6	16.7%
Theology					
Female			1	1	100.0%
Male	3		1	4	25.0%
Total					
Female	41	3	31	75	41.3%
Male	149	2	93	246	38.1%

We also assessed faculty attrition by examining the gender distribution of those who left Emory over the last decade. Table 8 displays the findings for faculty who left Emory between 1990 and 2001 for three periods: 1990 to 1995, 1995 to 2000, and 2000 to 2001. The faculty in these analyses exclude the retired and include only those who, at the termination date, were either tenured or on tenure-track appointments. In this way, one eliminates the cause of leaving as "end of temporary appointment" that might apply to many of those on non-tenure track. As Table 8 indicates, the percentage of women among faculty who left Emory has gradually decreased.

Table 8. Number of tenured and tenure-track faculty who left Emory, 1990-2001

	Left between 9/01/1990 and 8/31/95	Left between 9/01/1995 and 8/31/00	Left between 9/01/00 and 8/7/01
Female	23	29	2
Male	53	89	8
Total	76	118	10
% Female	30%	25%	20%

Between 1990 and 1995, 30 percent of the tenure track or tenured faculty who left Emory were women. Between 1995 and 2000, that proportion dropped to 25 percent. And during the last academic year, only 20 percent of the faculty who left Emory were women, which is substantially lower than the current female representation among regular full time faculty (29 percent).

III. Salary Equity Analysis

The following analysis focuses on non-medical tenured and tenure track faculty only. Together, the analysis includes 409 males and 176 females representing the full-time tenure-track and tenured faculty members in the ranks of professor, associate professor, and assistant professor.

Table 9 presents aggregate statistics for various human capital characteristics of the male and female subgroups. Note, for example, that 48.6 percent of the full-time male faculty members in tenure-track and tenured positions are full professors, whereas only 20.4 percent of their female counterparts hold the same rank. On average, males have 9.1 years of experience prior to coming to Emory (measured as years since Ph.D.) whereas females have 6.4 years of prior experience. In addition, male faculty tend to be employed in better paying disciplines, have more years in rank and more years of service at Emory, and are more likely to hold administrative appointments.

Table 9. Descriptive statistics for salary determinants

Variable	Female (N=176)	Male (N=409)
% with current or previous admin appointment	16.4%	22.5%
Avg years since degree	13.6	19.6
Avg years at Emory	9.1	12.7
Avg years of experience prior to joining Emory	6.4	9.1
Avg years in rank	5.2	9.2
% assistant professor	32.4%	18.6%
% associate professor	47.2%	32.8%
% professor	20.4%	48.6%
% of arts and sciences faculty in humanities	38.1%	24.2%

The average wage gaps between men and women for each rank are displayed in Table 10, which reveals that the salary advantage held by male faculty holds across all three ranks. The earnings gap between men and women is largest at the rank of full professor (9.9 percent) and smallest at the rank of assistant professor (8.8 percent).

Table 10. Tenured and Tenure Track Faculty* Salaries by Gender and Rank, 2000-01

	Average		Salary Gap as % of Avg Male Salary	Median		25th Percentile		75th Percentile	
	Female	Male		Female	Male	Female	Male	Female	Male
Assistant Prof	55,728	61,118	8.8%	51,376	53,754	48,760	49,645	53,352	61,931
Associate Prof	66,170	72,669	8.9%	62,270	65,954	57,360	58,422	71,930	82,147
Professor	102,235	113,406	9.9%	95,772	112,666	80,808	89,000	115,000	133,350

* Excludes School of Medicine faculty

At first glimpse, these wage differentials seem to be explained by differences in the mean observable characteristics of men and women. That is, men tend to be better represented in the higher paying fields and higher academic ranks, and have more years of experience at Emory and more years in rank.

These pay disparities are consistent with those found at other private universities. As Bellas (2001) data indicate, the salary advantage for men at the ten highest-paying private universities averages 10 percent. This group includes Rockefeller University, Harvard, Stanford, Princeton, Yale, University of Chicago, University of Pennsylvania, Babson College, Columbia, and New York University.

To determine the extent to which wage gaps at Emory are explained by differences in discipline, qualifications, and other human capital characteristics, we built a series of regression models based on data from the Institutional Research faculty database.

Method

The standard procedure for analyzing salary equity is multiple regression, a statistical technique used to develop an explanatory model based on a series of predictor variables. In studies of academic salaries, the following predictor variables are usually included in the regression analysis: years of experience (years since Ph.D.), seniority (years at the institution), education level (highest degree earned), and discipline. In addition to these widely used human capital factors, studies of gender equity in higher education also include measures of scholarly productivity (i.e., number of publications).

Only the non-medical tenured and tenure-track faculty at the ranks of full professor, associate professor and assistant professor, were included in the analysis. The expectations and rewards for the work of non-tenure track faculty, who are typically hired at the instructor or lecturer ranks, differ substantially from those with a tenure-track appointment. The cohort excludes the School of Nursing as there was no male faculty to allow for salary comparisons across gender lines. For an examination of how salaries in Nursing compare to those at peer schools, see Appendix B. In addition, School of Medicine faculty were not included in the analysis since salary data for those

faculty members were not available. Finally, the analysis excludes those faculty members who hold major administrative appointments at the ranks of Dean, Associate Dean, or Assistant Dean.

Dependent salary variables used in models (sal9mo). Throughout the analysis, we used two different dependent variables: the 9-month adjusted total salary and the natural log of 9-month adjusted total salary. Salaries were defined as base pay plus administrative supplements paid to chairs and program directors or supplements paid to endowed chairs. Twelve-month appointment salaries were converted to 9-month equivalency.

Researchers usually express salaries in logarithmic terms so that the obtained regression coefficients reflect the proportionate effect of changes in human capital characteristics on wages. However, the advantage of the models using linear scale for salary is that the regression coefficients –or parameter estimates-- can be directly and easily interpreted in real dollar amounts. For example, the coefficient for the gender variable is the average salary difference between male and female faculty, all the other variables held constant.

Predictor Variables. The predictor variables described below represent the common conceptual framework that one's salary is influenced, among other factors, by a faculty member's appointment (i.e., rank, appointment to an endowed chair, current or previous administrative appointment), his or her discipline, and his or her seniority (i.e., years at Emory, years in rank).

Academic Rank. Rank is an important predictor of compensation and must be included in any faculty salary analysis. Faculty rank was represented with three dummy coded variables: PROF, ASOC, ASSI, with the rank of Associate professor being the default category in the regression models.

Gender (FEMALE). This is a dichotomous variable that takes the value 1 for female faculty and 0 for male faculty.

Race. To control for the race/ethnicity of the faculty, we created four dichotomous variables: WHITE, ASIAN, BLACK, and HISPANIC. Each of these dummy variables has two values, either zero or one. WHITE is the default category in the regression models so the parameter estimate for ASIAN, for instance, tells us how much more or less money Asians make on average than Whites.

Years in Rank (TIMERANK). This variable indicates the total number of years of regular full-time appointment in the current rank held by the faculty member. It is hypothesized that, other things being equal, faculty in rank for a longer period of time would be compensated at a higher level than those in rank for a shorter period of time.

Years at Emory (EMEXPER). The salary model hypothesized that faculty who have been in service at Emory longer would be paid at a higher level than those with fewer years at the university. Years at Emory represents the total number of years of regular full-time appointment at Emory.

Current or Previous Administrative Experience (MNADM). Previous gender equity studies demonstrated that faculty who either previously held or currently hold administrative appointments receive higher levels of compensation. The variable MNADM was coded 1 for those faculty who currently hold or had held a prior administrative appointment as department chair or program director. That faculty members who had held appointments as deans, associate deans, or assistant deans were also coded 1.

Discipline. To account for the influence of external market factors associated with one's discipline, a set of 30 dummy variables was created to represent each academic department in the arts and sciences or the professional schools (see Appendix C). Each faculty member was assigned to one department based on the primary appointment. Because art history does not have any male faculty, we grouped faculty in that discipline along with those in music.

The School of Theology served as the baseline for comparison in the regression models. That means that the regression coefficient for the variable CHEM will indicate how much more or less money faculty in the Chemistry department make on average than faculty in Theology.

Distinguished Chair (DISTING). To account for the salary supplements received by endowed chairs, we created a dummy variable coded as 1 if a faculty member was an endowed chair, and 0 otherwise. One expects that, on average, distinguished chairholders will be paid higher than the full professors who do not hold a chair.

Since 99 percent of the faculty in the dataset hold a doctoral degree, we decided not to include the highest level of education as a predictor valuable in the model.

The Single-Equation Method

Empirical studies of salary equity typically measure the relative earnings of men and women (the "wage gap") and the earnings differential between men and women after controlling for human capital attributes such as experience and educational attainment (the "unexplained wage gap" or "pay disparity").

The unexplained wage gap between men and women can be calculated in several ways.
The most common method is the single-equation method, which uses the traditional regression models and includes gender among the predictor variables. To apply this method, we created a dichotomous variable for an individual's gender (FEMALE=1 if female and 0 otherwise) and added this variable to the earnings regression mode. The estimated coefficient for FEMALE will indicate the level of pay disparity for women after controlling for earning differences due to experience and other explanatory variables.

The bivariate correlations between salary, rank, gender, and other factors variables included in the regression models are presented in Appendix D. Both salary and gender seem to be significantly related to professorial rank, numbers of years in rank, number of years at Emory, administrative appointment, and distinguished chair status.

Moderators. Among the independent variables, researchers typically include gender interaction effects. The reason one needs to check such interactions is to ensure that there are no localized male-female differences that are masked by averaging over the entire sample. For example, the inclusion of an interaction term with years in current rank makes it possible to test statistically whether the effect of time in rank is the same for males and females rather than assuming that its influence is equal for males and females. This interaction effect might otherwise be hidden by the fact that there is no difference between males and females overall.

In two of our regression models, we tested for gender interaction effects with years at Emory, years in rank, academic rank, administrative appointment, and distinguished chair status. All main effects were forced to remain in the model after we added these two-way interactions.

There were no interaction effects as none of the obtained regression coefficients was significant at the .05 level.

We also tested for curvilinear effects by forcing into regressions the squared terms of years in rank and years at Emory. These additions allowed us to test for the presence of such effects as a decelerating relation between years of service and salary. If the quadratic effects are present for that particular variable, that would indicate a salary compression issue. We found that including either the squared years of service or the squared years in rank does not add significantly to the model's explanatory power. Therefore, only the models without quadratic effects were retained for discussion.

Four different regression models were tested to explain the gender difference in pay. Models 1 and 2 include only the linear combination of independent variables for each of the scales used to measure the dependent variable (linear and logarithmic). Models 3 and 4 add gender interaction effects to the equations derived in the first two models.

- The variables that were statistically significant at the .05 level were rank, years at Emory, years in rank, administrative experience, distinguished chairholder status, and discipline. These variables, however, might well be proxies for male advantage. That is, males tend to be concentrated in highly paid disciplines and are better represented among senior faculty ranks, administrative positions, and distinguished chairholders.

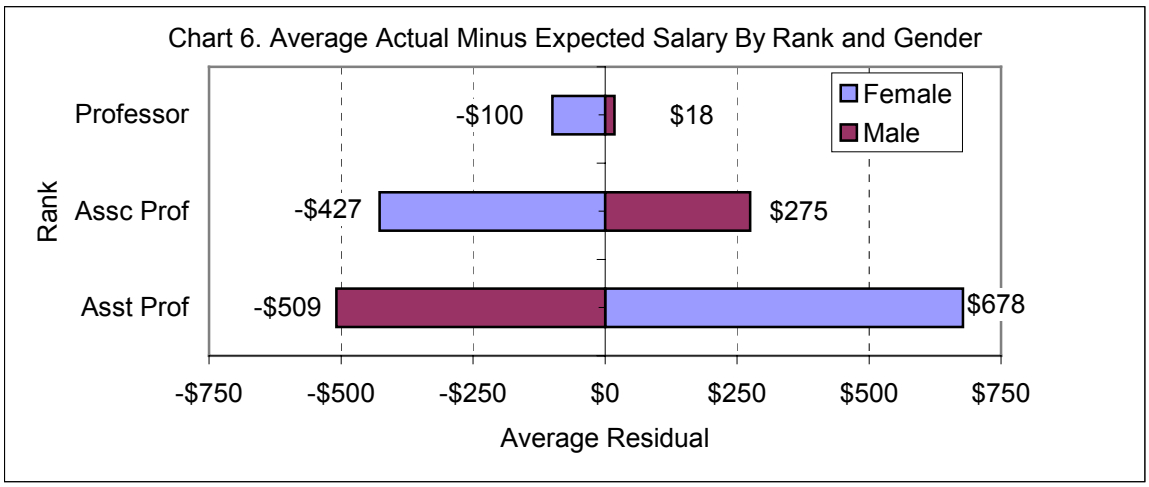
Table 11 displays the regression coefficient for the FEMALE variable in each of the four models. None of these coefficients is statistically significant at the .05 level. The size of these coefficients is also relatively small: with the exception of Model 2, betas are less than the standard error. The t-test (the regression coefficient divided by the standard error) values range from 0.01 to 1.48. Therefore, the regression coefficient for FEMALE is not significantly different from zero in any of the four models. We also found no significant effects for the ethnicity variables.

Table 11. Results of the regression models based on the single-equation method.

Model	Dependent Variable	Gender Interaction Variables	Adjusted R-square	Parameter estimate for variable Female	Standard Error	T for H0: parameter=0	prob >ItI
Model 1	Total Salary	No	0.82	-$1378	$1459	-0.94	0.345
Model 2	Log Total Salary	No	0.84	-2.24%	-1.51%	-1.48	0.139
Model 3	Log Total Salary	Yes	0.81	-1.73%	-3.79%	-0.46	0.648
Model 4	Total Salary	Yes	0.80	$44	$3457	0.01	0.989

Model 1 shows that, on average, female faculty earn $1,378 less than their male colleagues, after controlling for factors such as discipline, time in rank, years of experience at Emory, administrative experience, and distinguished chair status. The difference is not statistically significant at the .05 level, however. Similarly, gender does not appear to be a statistically significant predictor of salary in any of the other three models.

Chart 6 displays the average residuals (actual minus predicted salary) by rank and gender. The residuals indicate how the actual salaries of men and women at each rank compare to those predicted by Model 1.



As the chart reveals, at the professor and associate professor level, women tend to be slightly underpaid while at the assistant professor they are slightly overpaid. These differences are of small magnitude, however. Overall, both men and women appear to be compensated relatively close to the levels predicted by their main human capital characteristics and discipline.

Finally, we built similar regression models for each school. In datasets with a relatively small number of faculty--fewer than 50 in some schools--the data of one or two individuals may strongly influence the results of the regression. Thus, results of these regressions must be interpreted with caution. The results are not reproduced in this report because the sample sizes of female faculty are too small to be discussed in such a way that it is possible to completely guarantee the privacy of individuals. However, no statistical significance was found for the gender coefficient in any of the six schools examined in the study (Emory College, Business, Law, Public Health, Oxford, and Theology).

The Multiple-Equation Method

While the single-equation method is often used because is easy to implement and the results can be readily interpreted, it has often been criticized on the grounds that the coefficient for the gender dummy variable may be biased due to multicolinearity between this variable and other independent variables.

One alternative method to address this problem was developed by Oaxaca (1973). This method requires that the earnings equation be estimated separately for men and women.[2] The rationale for this method is to estimate what women would be paid on average if they were paid as men.

[2] One problem we encountered in using this approach is that there are no males in the Nursing School, which makes it impossible to derive accurate predicted salaries for the female faculty in that school. One way to get around this problem was recommended by Scott (1977) who proposed agreeing on a discipline that is similar to the discipline with no males in it. For instance, if Emory had a Pharmacy field, the Pharmacy male coefficient could be used in calculating the nursing faculty predicted salaries. However, since at Emory there is no real similar discipline, Nursing faculty were excluded from the analysis.

The method involves three steps. First, one develops a regression model predicting the male faculty salaries. The resulting "male" equation is then used to predict what the salaries for women would be if their career attributes were rewarded in the same way as those of males. At the same time, one calculates salary residuals for each female faculty, which is the difference between each woman's predicted salary, based on the male equation and her actual salary. These differences are then averaged. Systematic negative average residuals for female faculty would indicate that their actual salaries are lower than their predicted salaries using the male equation. This would be consistent with gender bias in salaries but could also occur for other reasons.

Two analytical models were developed. Both models included race, discipline, years in rank, years at Emory, administrative appointment status, and distinguished chair status. One model used linear scaling for the dependent variable and the other used logarithmic scaling. The variables that were statistically significant in the "male" regression equation in both models were rank, years at Emory, years in rank, administrative experience, distinguished chair status, and discipline.

Using the coefficients from the "male" equation, we then calculated the predicted salaries for female faculty. The findings are summarized in Table 12. Overall, the results reveal relatively small average residuals. Model 1 shows that there is a 1.6 percent gap between the average actual female salary and the predicted average salary using the male equation. Similarly, Model 2 indicates that the average actual salary for female faculty is $385 lower than the average predicted salary using the male equation. In both models, however, the average salary residuals are not significant at the .05 level.

Table 12. Results of the regression models based on the multiple-equation method.

Model	Dependent Variable	Adjusted R-square	Standard Error	Average Female Residual	T for H0: Avg Resid=0	prob >ItI
1	Ln(SALARY	0.82	-1.0%	-1.6%	-1.6	0.11
2	SALARY	0.80	$963	-$385	-0.4	0.69

The models are relatively strong: adjusted R-squares are .80 for the model using the linear scale of the salary and .82 for the model using the logarithmic scale.

Conclusions

Overall, the results of this study suggest that the wage gap between men and women can be largely explained by differences in years in rank, years at Emory, years in rank, and discipline. These variables account for more than 80 percent of the variance in faculty salaries. Gender differences in salaries might also be related to the recent increase in the representation of women faculty at Emory. That is, since a greater proportion of women than men are new hires, women have less average seniority in rank. As a result, in earlier years, merit increases in salaries would have benefited male faculty members more than females primarily because female faculty members were not around to benefit from the percentage increments.

The analysis also reveals that female faculty constitute a lower percentage of faculty at full rank. Continued attention must be paid to ensuring gender equity in promotion/tenure decisions, especially when promoting to full professor.

Finally, female faculty represent a lower percentage of faculty in the schools and disciplines that tend to receive higher pay. One consequence of this is that women students and junior faculty are

denied senior woman mentors, role models, and advocates, especially in higher paying fields such as business and law. In particular, sustained efforts are needed to recruit women in the professional schools and the natural sciences.

Limitations of the Analysis

There are at least two limitations related to using regression analysis in studies of gender equity. First, quantitative measures of research productivity were not included in the regression models. Thus, the analysis assumes that men and women are, on average, equally productive given the other variables in the analysis. Indeed, similar studies at other universities have found no significant gender differences in scholarly productivity.

Second, statistical analyses are useful for providing data in the aggregate. Although the results of these analyses show no significant gender gap in salaries for the university as a whole, inequitable pay gaps may exist for individual faculty members. This is why, in addition to examining average residuals for the whole group of female faculty, we recommend that Emory's schools calculate and evaluate salary residuals annually for each faculty member. [3]

Other issues to be studied

Although the findings of this analysis do not point to evidence of gender inequities in faculty compensation at Emory, the examination of gender equity issues should go beyond salary equity analysis. For example, a thorough analysis of workload distribution across gender lines might reveal that female faculty are assigned additional committee responsibilities because of their "representational service" as female members of committees and task forces or that they might have disproportionate teaching or student advising loads.

One needs to better understand why women leave Emory. To gain insights about these reasons, the PCSW Faculty Concerns Committee could conduct informal interviews with department chairs or with women who recently left the university. Similarly, the relatively low proportion of women hired at senior academic ranks should prompt a closer look at how the university handles faculty recruiting. One question that might be pursued is: How often are female faculty found in the top 10 most-qualified candidates as ranked by the search committee?

Finally, access to institutional research funds, lab space, release time, and other research resources should be examined separately for male and female faculty. Ultimately, access to such resources determines one's productivity, and, in turn, his or her salary.

Policy Recommendations

1. Conduct periodic salary-and promotion-equity studies. Even though the data for 2000-01 faculty salaries revealed that the wage gaps are not statistically significant and are not attributable to discrimination, disparities in pay might occur in the future. To avoid such disparities, Emory should engage in regular pay equity studies. A comprehensive university-wide gender equity analysis should be undertaken periodically and a common methodology should be selected and used systematically to build historical data on salary and promotion equity.

[3] A recent gender equity study at Stanford University, for example, recommends a careful review within each school of the cases with residuals that fall in the bottom 20 percent.

But even more important than calculating aggregate gaps at the university level, is studying pay equity at the school level. Each school could use regression analysis methods, such as those employed in this study, to examine salaries by gender and to ensure that sound justification exists for salary differences among faculty with comparable years of experience, rank, and discipline. The single equation model as applied to the school level could involve the following steps:

a. Estimate the relationship between salaries and observable variables such as years since highest degree, years at Emory, rank, and department.
b. For each faculty member, use the equation established at Step (a) to calculate the salary residual, which is the difference between an individual's actual salary and the salary predicted by the regression equation.
c. Order individuals by the magnitude of their salary residuals. Academic administrators should carefully consider all individuals in the bottom 20 percent of residuals to determine whether factors omitted from the estimated relationship–-variables such as teaching effectiveness, research quality--can account for the size of the residual. (An alternative approach is to focus on those residuals that are one standard deviation or more apart from the predicted salary.) If these factors cannot account for the residual of a faculty member, then this signals the need for a salary adjustment.

2. *Monitor merit increases.* Department chairs and other academic decision makers should closely monitor the merit-pay system in their units to ensure that it does not have a disproportionately effect on the salaries of women.

3. Use labor pool data in recruiting efforts. Not all academic fields manage to hire women in proportions comparable to their availability. Search committees should use data on the proportion of women in the labor pool when they plan searches. Without formally considering data regarding the proportion of women in the labor pool while planning searches, search committees may not know how much effort they need to make towards addressing issues related to the lack of gender parity within their departments.

References

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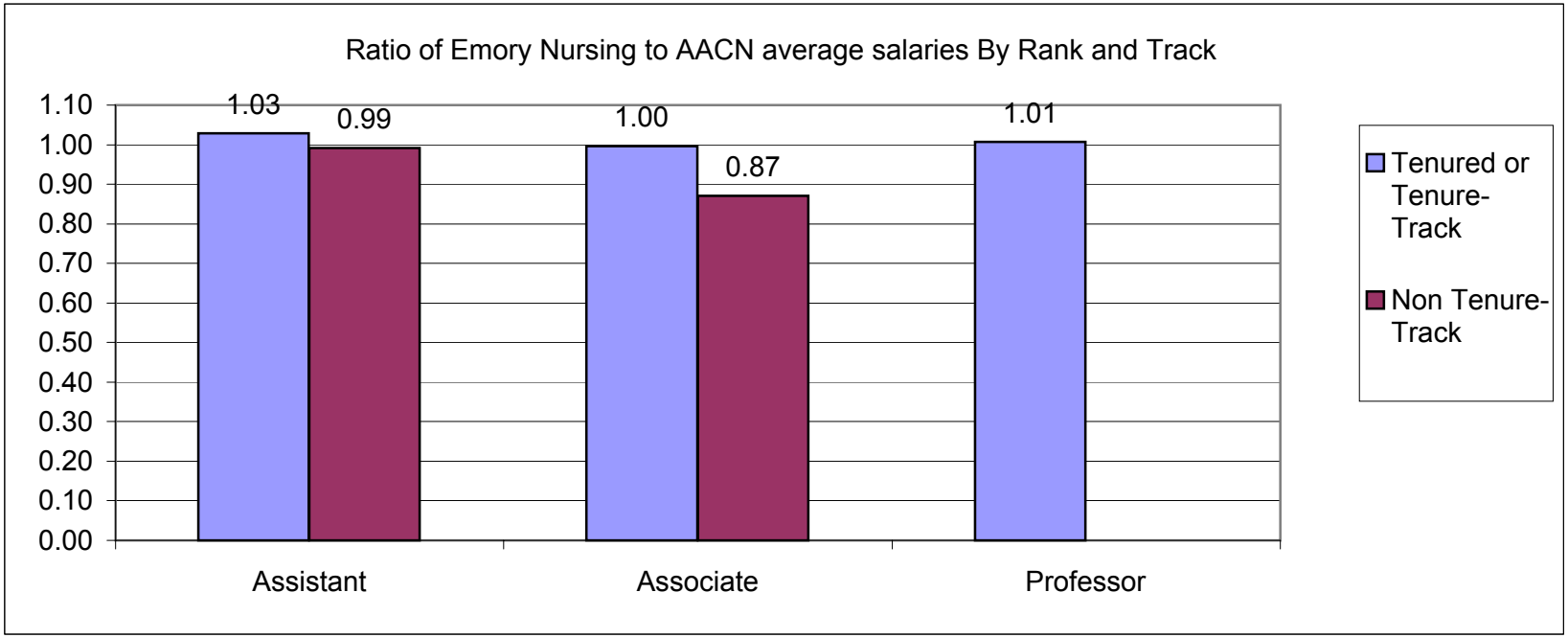
Appendix A: Non-Medical Faculty Hires by Gender and School, 1998-99 to 2000-01

	1998-99		1999-00		2000-01		Total 1998-2000		Total 1998-2000	
	female	male	female	male	female	male	female	male	female by rank	male by rank
Emory College										
lect/sen lect/instr	4	3	4	2	7	4	15	9	45%	25%
assistant	2	6	7	6	8	7	17	19	52%	53%
associate	1	2	0	1	0	2	1	5	3%	14%
professor	0	0	0	1	0	2	0	3	0%	8%
Total	7	11	11	10	15	15	33	36	100%	100%
Oxford College										
lect/sen lect/instr	3	1	0	2	0	0	3	3	38%	50%
assistant	0	0	1	1	4	1	5	2	63%	33%
associate	0	0	0	0	0	1	0	1	0%	17%
professor	0	0	0	0	0	0	0	0	0%	0%
Total	3	1	1	3	4	2	8	6	100%	100%
Goizueta Business School										
lect/sen lect/instr	0	0	0	2	0	0	0	2	0%	11%
assistant	3	3	1	2	2	3	6	8	67%	44%
associate	1	0	1	3	0	1	2	4	22%	22%
professor	0	0	1	4	0	0	1	4	11%	22%
Total	4	3	3	11	2	4	9	18	100%	100%
School of Law										
lect/sen lect/instr	0	0	0	0	0	0	0	0	0%	0%
assistant	0	0	0	0	0	0	0	0	0%	0%
associate	0	0	0	1	0	0	0	1	0%	50%
professor	0	0	0	1	0	0	0	1	0%	50%
Total	0	0	0	2	0	0	0	2	0%	100%
Nell Hodsdon Woodruff School of Nursing										
lect/sen lect/instr	0	0	0	0	0	0	0	0	0%	0%
assistant	1	0	0	0	0	0	1	0	100%	0%
associate	0	0	0	0	0	0	0	0	0%	0%
professor	0	0	0	0	0	0	0	0	0%	0%
Total	1	0	0	0	0	0	1	0	100%	0%
Rollins School of Public Health										
lect/sen lect/instr	0	0	0	0	0	0	0	0	0%	0%
assistant	1	1	3	4	0	3	4	8	57%	44%
associate	0	2	3	3	0	0	3	5	43%	28%
professor	0	1	0	4	0	0	0	5	0%	28%
Total	1	4	6	11	0	3	7	18	100%	100%
Candler School of Theology										
lect/sen lect/instr	2	1	0	1	0	0	2	2	40%	29%
assistant	2	1	0	1	0	0	2	2	40%	29%
associate	0	1	0	0	0	0	0	1	0%	14%
professor	0	1	1	1	0	0	1	2	20%	29%
Total	4	4	1	3	0	0	5	7	100%	100%
Total University										
lect/sen lect/instr	9	5	4	7	7	4	20	16	32%	18%
assistant	9	11	12	14	14	14	35	39	56%	45%
associate	2	5	4	8	0	4	6	17	10%	20%
professor	0	2	2	11	0	2	2	15	3%	17%
Total	20	23	22	40	21	24	63	87	100%	100%

2000-2001 Salaries at the Nell Hodgson Woodruff School of Nursing and Peer Institutions

This graph compares mean salaries in Nursing at Emory to all AACN schools that have an academic health center. For tenured and tenure-track faculty, averages at Emory are comparable to the AACN means. For the non-tenure track positions, however, the average salaries are slightly lower than the means for the AACN group, particularly at the associate professor level.



Source: American Association of Colleges of Nursing (AACN) Institutional Data Systems

**The comparison group includes all AACN schools that have an Academic Health Center.*

Appendix C: Dummy Variables Used to Code Disciplines

ANTH--1 if the faculty member has primary appointment in the Anthropology department, and 0 otherwise;

BIOL--1 if the faculty member has primary appointment in the Biology department, and 0 otherwise;

CHEM--1 if the faculty member has primary appointment in the Chemistry department, and 0 otherwise;

CLAS--1 if the faculty member has primary appointment in the Classics department, and 0 otherwise;

CHEM--1 if the faculty member has primary appointment in the Anthropology department, and 0 otherwise;

ECON--1 if the faculty member has primary appointment in the Economics department, and 0 otherwise;

EDUC--1 if the faculty member has primary appointment in the Educational Studies Division, and 0 otherwise;

ENGL--1 if the faculty member has primary appointment in the English department, and 0 otherwise;

ENVI--1 if the faculty member has primary appointment in the Environmental Stuides department, and 0 otherwise;

FREN--1 if the faculty member has primary appointment in the French and Italian department, and 0 otherwise;

GERM--1 if the faculty member has primary appointment in the German department, and 0 otherwise;

HIST--1 if the faculty member has primary appointment in the History department, and 0 otherwise;

ILA--1 if the faculty member has primary appointment in the Institute for Liberal Arts, and 0 otherwise;

MATH--1 if the faculty member has primary appointment in the Mathematics & Computer Science department, and 0 otherwise;

MIDD--1 if the faculty member has primary appointment in the Middle Eastern Languages department, and 0 otherwise;

MUAH--1 if the faculty member has primary appointment in the Music or Art History departments, and 0 otherwise;

PHIL--1 if the faculty member has primary appointment in the Philosophy department, and 0 otherwise;

PHED--1 if the faculty member has primary appointment in the Physical Education department, and 0 otherwise;

PHYS--1 if the faculty member has primary appointment in the Physics department, and 0 otherwise;

POLS--1 if the faculty member has primary appointment in the Political Sciences department, and 0 otherwise;

REAL--1 if the faculty member has primary appointment in the Russian and Eastern European Studies department, and 0 otherwise;

RELI--1 if the faculty member has primary appointment in the Religion department, and 0 otherwise;

SOCI--1 if the faculty member has primary appointment in the Sociology department, and 0 otherwise;

SPAN--1 if the faculty member has primary appointment in the Spanish & Portuguese department, and 0 otherwise;

THEA--1 if the faculty member has primary appointment in the Theater & Film Studies department, and 0 otherwise;

BUS--1 if the faculty member has primary appointment in the Business School, and 0 otherwise;

SPH--1 if the faculty member has primary appointment in the School of Public Health, and 0 otherwise;

OXF--1 if the faculty member has primary appointment at Oxford College, and 0 otherwise;

LAW--1 if the faculty member has primary appointment in the Law School, and 0 otherwise;

THEO--1 if the faculty member has primary appointment in the School of Theology, and 0 otherwise.

Appendix D. Descriptive Statistics and Pearson Correlation Coefficients for Regression Variables

Simple Statistics

Variable	N	Mean	Std Dev	Sum	Minimum	Maximum
sal9mo	585	84563	33853	49469370	36000	220961
FEMALE	585	0.30085	0.45902	176.00000	0	1.00000
ASIAN	585	0.06154	0.24052	36.00000	0	1.00000
BLACK	585	0.05470	0.22759	32.00000	0	1.00000
HISP	585	0.01880	0.13595	11.00000	0	1.00000
FULL	585	0.40171	0.49066	235.00000	0	1.00000
ASSI	585	0.22735	0.41948	133.00000	0	1.00000
EMexper	585	11.62393	9.33649	6800	0	47.00000
timerank	577	8.00867	7.91568	4621	0	39.00000
ANTH	585	0.03419	0.18187	20.00000	0	1.00000
BIOL	585	0.04103	0.19852	24.00000	0	1.00000
CHEM	585	0.03932	0.19451	23.00000	0	1.00000
CLAS	585	0.01368	0.11624	8.00000	0	1.00000
ECON	585	0.02564	0.15820	15.00000	0	1.00000
EDUC	585	0.01368	0.11624	8.00000	0	1.00000
ENGL	585	0.06154	0.24052	36.00000	0	1.00000
ENVI	585	0.00513	0.07149	3.00000	0	1.00000
FREN	585	0.01880	0.13595	11.00000	0	1.00000
GERM	585	0.01026	0.10084	6.00000	0	1.00000
HIST	585	0.05128	0.22076	30.00000	0	1.00000
ILA	585	0.02906	0.16812	17.00000	0	1.00000
MATH	585	0.04615	0.21000	27.00000	0	1.00000
MIDD	585	0.01538	0.12318	9.00000	0	1.00000
MUAH	585	0.04103	0.19852	24.00000	0	1.00000
PHIL	585	0.02906	0.16812	17.00000	0	1.00000
PHED	585	0.02051	0.14187	12.00000	0	1.00000
PHYS	585	0.02735	0.16324	16.00000	0	1.00000
POLS	585	0.05128	0.22076	30.00000	0	1.00000
PSYC	585	0.05128	0.22076	30.00000	0	1.00000
REAL	585	0.00855	0.09213	5.00000	0	1.00000
RELI	585	0.02735	0.16324	16.00000	0	1.00000
SOCI	585	0.02735	0.16324	16.00000	0	1.00000
SPAN	585	0.01709	0.12973	10.00000	0	1.00000
THEA	585	0.01197	0.10882	7.00000	0	1.00000
BUS	585	0.07692	0.26670	45.00000	0	1.00000
SPH	585	0.08889	0.28483	52.00000	0	1.00000
LAW	585	0.05299	0.22421	31.00000	0	1.00000
OXF	585	0.06667	0.24966	39.00000	0	1.00000
DISTING	585	0.15214	0.35946	89.00000	0	1.00000
MNADM	585	0.20684	0.40538	121.00000	0	1.00000

Pearson Correlation Coefficients
(second line: Prob > |r| under H0; third line: Rho=0, Number of Observations)

	sal9mo	FEMALE	ASIAN	BLACK	HISP	FULL	ASSI	EMexper
sal9mo	1.00000	-0.26054	0.03214	0.02829	-0.00963	0.67166	-0.41352	0.19140
		<.0001	0.4378	0.4947	0.8163	<.0001	<.0001	<.0001
	585	585	585	585	585	585	585	585
FEMALE	-0.26054	1.00000	-0.02839	0.05528	-0.03593	-0.26382	0.15106	-0.17453
	<.0001		0.4931	0.1818	0.3857	<.0001	0.0002	<.0001
	585	585	585	585	585	585	585	585
ASIAN	0.03214	-0.02839	1.00000	-0.06160	-0.03545	-0.07924	0.08172	-0.06974
	0.4378	0.4931		0.1367	0.3921	0.0554	0.0482	0.0919
	585	585	585	585	585	585	585	585
BLACK	0.02829	0.05528	-0.06160	1.00000	-0.03330	-0.02844	0.06681	-0.08136
	0.4947	0.1818	0.1367		0.4214	0.4924	0.1065	0.0492
	585	585	585	585	585	585	585	585
HISP	-0.00963	-0.03593	-0.03545	-0.03330	1.00000	-0.03642	0.04501	-0.02680
	0.8163	0.3857	0.3921	0.4214		0.3792	0.2770	0.5177
	585	585	585	585	585	585	585	585
FULL	0.67166	-0.26382	-0.07924	-0.02844	-0.03642	1.00000	-0.44448	0.38813
	<.0001	<.0001	0.0554	0.4924	0.3792		<.0001	<.0001
	585	585	585	585	585	585	585	585
ASSI	-0.41352	0.15106	0.08172	0.06681	0.04501	-0.44448	1.00000	-0.50585
	<.0001	0.0002	0.0482	0.1065	0.2770	<.0001		<.0001
	585	585	585	585	585	585	585	585
EMexper	0.19140	-0.17453	-0.06974	-0.08136	-0.02680	0.38813	-0.50585	1.00000
	<.0001	<.0001	0.0919	0.0492	0.5177	<.0001	<.0001	
	585	585	585	585	585	585	585	585
timerank	0.31806	-0.22859	-0.04105	-0.05760	-0.04662	0.34787	-0.35182	0.74721
	<.0001	<.0001	0.3249	0.1670	0.2635	<.0001	<.0001	<.0001
	577	577	577	577	577	577	577	577
ANTH	-0.00548	0.08170	-0.04818	-0.00389	-0.02605	0.01853	0.01017	-0.03779
	0.8947	0.0483	0.2446	0.9252	0.5295	0.6546	0.8061	0.3615
	585	585	585	585	585	585	585	585
BIOL	-0.02493	-0.06052	-0.01710	-0.01186	-0.02863	0.04147	0.01118	0.00002
	0.5473	0.1438	0.6797	0.7748	0.4894	0.3167	0.7873	0.9995
	585	585	585	585	585	585	585	585

	timerank	ANTH	BIOL	CHEM	CLAS	ECON	EDUC	ENGL
sal9mo	0.31806	-0.00548	-0.02493	0.08999	-0.02316	0.00147	-0.01709	-0.06383
	<.0001	0.8947	0.5473	0.0295	0.5761	0.9716	0.6799	0.1230
	577	585	585	585	585	585	585	585
FEMALE	-0.22859	0.08170	-0.06052	-0.09435	0.01904	-0.05925	0.01904	0.08017
	<.0001	0.0483	0.1438	0.0225	0.6459	0.1523	0.6459	0.0526
	577	585	585	585	585	585	585	585
ASIAN	-0.04105	-0.04818	-0.01710	0.05800	-0.03015	0.09347	0.03109	-0.00638
	0.3249	0.2446	0.6797	0.1612	0.4667	0.0238	0.4529	0.8777
	577	585	585	585	585	585	585	585
BLACK	-0.05760	-0.00389	-0.01186	-0.04866	-0.02832	-0.03902	0.10113	0.03224
	0.1670	0.9252	0.7748	0.2399	0.4941	0.3461	0.0144	0.4363
	577	585	585	585	585	585	585	585
HISP	-0.04662	-0.02605	-0.02863	-0.02801	-0.01630	-0.02246	0.09206	-0.03545
	0.2635	0.5295	0.4894	0.4990	0.6940	0.5878	0.0260	0.3921
	577	585	585	585	585	585	585	585
FULL	0.34787	0.01853	0.04147	0.08541	-0.03644	-0.04469	0.02361	0.02232
	<.0001	0.6546	0.3167	0.0389	0.3790	0.2806	0.5688	0.5900
	577	585	585	585	585	585	585	585
ASSI	-0.35182	0.01017	0.01118	-0.02579	-0.02875	0.04102	-0.02875	0.01384
	<.0001	0.8061	0.7873	0.5335	0.4876	0.3220	0.4876	0.7384
	577	585	585	585	585	585	585	585
EMexper	0.74721	-0.03779	0.00002	0.03927	-0.02208	-0.02476	0.00948	-0.00721
	<.0001	0.3615	0.9995	0.3430	0.5941	0.5500	0.8190	0.8618
	577	585	585	585	585	585	585	585
timerank	1.00000	-0.01818	-0.04413	0.14510	0.00174	0.02874	-0.03574	-0.06914
		0.6630	0.2899	0.0005	0.9667	0.4908	0.3915	0.0971
	577	577	577	577	577	577	577	577
ANTH	-0.01818	1.00000	-0.03891	-0.03806	-0.02215	-0.03052	-0.02215	-0.04818
	0.6630		0.3474	0.3581	0.5928	0.4612	0.5928	0.2446
	577	585	585	585	585	585	585	585
BIOL	-0.04413	-0.03891	1.00000	-0.04184	-0.02435	-0.03355	-0.02435	-0.05297
	0.2899	0.3474		0.3123	0.5566	0.4179	0.5566	0.2008
	577	585	585	585	585	585	585	585

	ENVI	FREN	GERM	HIST	ILA	MATH	MIDD	MUAH
sal9mo	0.00140	-0.01975	-0.04533	-0.04245	-0.07134	-0.05971	-0.07770	-0.12764
	0.9731	0.6335	0.2737	0.3054	0.0847	0.1492	0.0604	0.0020
	585	585	585	585	585	585	585	585
FEMALE	-0.04710	0.10127	-0.02978	0.03336	0.10840	-0.05548	-0.05171	0.08981
	0.2554	0.0143	0.4721	0.4206	0.0087	0.1802	0.2117	0.0299
	585	585	585	585	585	585	585	585
ASIAN	-0.01839	-0.03545	-0.02607	-0.05954	-0.04430	0.11318	-0.03201	-0.01710
	0.6572	0.3921	0.5292	0.1504	0.2847	0.0061	0.4397	0.6797
	585	585	585	585	585	585	585	585
BLACK	-0.01727	-0.03330	-0.02449	0.01223	0.09264	-0.05291	-0.03007	-0.01186
	0.6768	0.4214	0.5545	0.7678	0.0250	0.2013	0.4679	0.7748
	585	585	585	585	585	585	585	585
HISP	-0.00994	-0.01916	-0.01409	-0.03219	-0.02395	-0.03045	-0.01730	-0.02863
	0.8104	0.6437	0.7338	0.4372	0.5632	0.4623	0.6762	0.4894
	585	585	585	585	585	585	585	585
FULL	-0.01001	-0.01075	-0.08341	-0.01662	-0.05873	-0.04730	-0.07410	-0.09917
	0.8090	0.7953	0.0437	0.6883	0.1560	0.2534	0.0733	0.0164
	585	585	585	585	585	585	585	585
ASSI	0.01815	0.01499	-0.01474	-0.05215	0.02756	-0.02213	-0.00153	0.03174
	0.6612	0.7175	0.7220	0.2078	0.5059	0.5932	0.9706	0.4435
	585	585	585	585	585	585	585	585
EMexper	-0.01506	-0.02410	0.14415	0.05590	-0.03012	0.06040	-0.03963	-0.02307
	0.7162	0.5608	0.0005	0.1770	0.4672	0.1446	0.3387	0.5776
	585	585	585	585	585	585	585	585
timerank	-0.00008	-0.00015	0.14246	0.05304	-0.00667	0.08484	-0.04965	-0.04852
	0.9985	0.9971	0.0006	0.2033	0.8730	0.0416	0.2337	0.2446
	577	577	577	577	577	577	577	577
ANTH	-0.01351	-0.02605	-0.01915	-0.04374	-0.03255	-0.04139	-0.02352	-0.03891
	0.7444	0.5295	0.6439	0.2909	0.4320	0.3177	0.5702	0.3474
	585	585	585	585	585	585	585	585
BIOL	-0.01485	-0.02863	-0.02106	-0.04809	-0.03578	-0.04550	-0.02585	-0.04278
	0.7200	0.4894	0.6113	0.2455	0.3876	0.2719	0.5326	0.3016
	585	585	585	585	585	585	585	585

	PHIL	PHED	PHYS	POLS	PSYC	REAL	RELI	SOCI
sal9mo	-0.00464	-0.10888	-0.03498	-0.06742	0.00289	-0.04679	-0.05047	-0.07013
	0.9108	0.0084	0.3984	0.1033	0.9444	0.2585	0.2228	0.0902
	585	585	585	585	585	585	585	585
FEMALE	-0.04692	0.08913	-0.08715	-0.10182	-0.00043	0.06056	-0.01859	0.04996
	0.2572	0.0311	0.0351	0.0137	0.9917	0.1435	0.6536	0.2276
	585	585	585	585	585	585	585	585
ASIAN	-0.04430	0.01312	0.13151	-0.05954	-0.05954	0.05350	-0.04294	-0.04294
	0.2847	0.7514	0.0014	0.1504	0.1504	0.1963	0.2998	0.2998
	585	585	585	585	585	585	585	585
BLACK	-0.04162	-0.03481	-0.04034	0.01223	0.01223	-0.02233	0.00575	0.00575
	0.3150	0.4007	0.3301	0.7678	0.7678	0.5898	0.8896	0.8896
	585	585	585	585	585	585	585	585
HISP	-0.02395	0.06875	-0.02321	0.02487	-0.03219	-0.01285	-0.02321	-0.02321
	0.5632	0.0967	0.5752	0.5483	0.4372	0.7564	0.5752	0.5752
	585	585	585	585	585	585	585	585
FULL	0.04506	-0.02018	-0.00914	-0.04824	0.10985	-0.03820	0.01224	0.01224
	0.2765	0.6261	0.8255	0.2441	0.0078	0.3564	0.7676	0.7676
	585	585	585	585	585	585	585	585
ASSI	-0.04528	-0.02095	0.00906	0.04030	-0.03366	0.03825	-0.04095	0.03407
	0.2742	0.6130	0.8269	0.3305	0.4164	0.3558	0.3228	0.4108
	585	585	585	585	585	585	585	585
EMexper	0.02334	0.11830	0.09889	0.00937	0.11322	-0.03010	-0.07526	-0.00672
	0.5732	0.0042	0.0167	0.8210	0.0061	0.4675	0.0689	0.8711
	585	585	585	585	585	585	585	585
timerank	0.01536	0.02748	0.12660	0.00567	0.08068	-0.04502	-0.04823	-0.04022
	0.7127	0.5100	0.0023	0.8920	0.0527	0.2803	0.2474	0.3348
	577	577	577	577	577	577	577	577
ANTH	-0.03255	-0.02723	-0.03155	-0.04374	-0.04374	-0.01747	-0.03155	-0.03155
	0.4320	0.5110	0.4463	0.2909	0.2909	0.6733	0.4463	0.4463
	585	585	585	585	585	585	585	585
BIOL	-0.03578	-0.02993	-0.03468	-0.04809	-0.04809	-0.01920	-0.03468	-0.03468
	0.3876	0.4699	0.4024	0.2455	0.2455	0.6430	0.4024	0.4024
	585	585	585	585	585	585	585	585

	SPAN	THEA	BUS	SPH	LAW	OXF	DISTING	MNADM
sal9mo	-0.10620	-0.03682	0.32669	0.10384	0.31085	-0.26398	0.56105	0.28912
	0.0102	0.3740	<.0001	0.0120	<.0001	<.0001	<.0001	<.0001
	585	585	585	585	585	585	585	585
FEMALE	0.05726	-0.00363	-0.04949	0.05704	-0.08862	0.06375	-0.14296	-0.06813
	0.1666	0.9301	0.2320	0.1682	0.0321	0.1235	0.0005	0.0997
	585	585	585	585	585	585	585	585
ASIAN	-0.03377	-0.02818	0.21971	-0.02999	-0.06057	-0.01141	0.03017	-0.09564
	0.4149	0.4963	<.0001	0.4690	0.1434	0.7831	0.4665	0.0207
	585	585	585	585	585	585	585	585
BLACK	-0.03172	-0.02647	0.01519	-0.02231	0.04377	-0.03415	0.04462	-0.04860
	0.4438	0.5228	0.7139	0.5903	0.2906	0.4096	0.2813	0.2405
	585	585	585	585	585	585	585	585
HISP	0.27301	-0.01523	0.14895	0.00098	-0.03275	0.01345	-0.02360	0.02252
	<.0001	0.7131	0.0003	0.9811	0.4292	0.7454	0.5689	0.5867
	585	585	585	585	585	585	585	585
FULL	-0.08116	-0.05811	-0.05335	0.01361	0.17973	-0.12115	0.45871	0.22721
	0.0498	0.1604	0.1976	0.7425	<.0001	0.0033	<.0001	<.0001
	585	585	585	585	585	585	585	585
ASSI	0.08579	-0.05970	0.13422	-0.05478	-0.11011	-0.01417	-0.22978	-0.27701
	0.0380	0.1493	0.0011	0.1858	0.0077	0.7323	<.0001	<.0001
	585	585	585	585	585	585	585	585
EMexper	-0.06961	-0.01242	-0.18022	-0.07112	0.05371	-0.00098	0.11504	0.18481
	0.0926	0.7644	<.0001	0.0857	0.1946	0.9811	0.0053	<.0001
	585	585	585	585	585	585	585	585
timerank	-0.04716	0.04592	-0.11463	-0.10110	0.04250	-0.04132	0.24646	0.15813
	0.2580	0.2708	0.0058	0.0151	0.3081	0.3218	<.0001	0.0001
	577	577	577	577	577	577	577	577
ANTH	-0.02481	-0.02071	-0.05431	-0.05877	-0.04451	0.02514	-0.02731	0.02005
	0.5492	0.6172	0.1896	0.1557	0.2825	0.5439	0.5097	0.6284
	585	585	585	585	585	585	585	585
BIOL	-0.02728	-0.02276	-0.05971	-0.06460	-0.04893	0.04837	0.00837	-0.04179
	0.5103	0.5827	0.1492	0.1186	0.2374	0.2428	0.8399	0.3129
	585	585	585	585	585	585	585	585

	sal9mo	FEMALE	ASIAN	BLACK	HISP	FULL	ASSI	EMexper
CHEM	0.08999	-0.09435	0.05800	-0.04866	-0.02801	0.08541	-0.02579	0.03927
	0.0295	0.0225	0.1612	0.2399	0.4990	0.0389	0.5335	0.3430
	585	585	585	585	585	585	585	585
CLAS	-0.02316	0.01904	-0.03015	-0.02832	-0.01630	-0.03644	-0.02875	-0.02208
	0.5761	0.6459	0.4667	0.4941	0.6940	0.3790	0.4876	0.5941
	585	585	585	585	585	585	585	585
ECON	0.00147	-0.05925	0.09347	-0.03902	-0.02246	-0.04469	0.04102	-0.02476
	0.9716	0.1523	0.0238	0.3461	0.5878	0.2806	0.3220	0.5500
	585	585	585	585	585	585	585	585
EDUC	-0.01709	0.01904	0.03109	0.10113	0.09206	0.02361	-0.02875	0.00948
	0.6799	0.6459	0.4529	0.0144	0.0260	0.5688	0.4876	0.8190
	585	585	585	585	585	585	585	585
ENGL	-0.06383	0.08017	-0.00638	0.03224	-0.03545	0.02232	0.01384	-0.00721
	0.1230	0.0526	0.8777	0.4363	0.3921	0.5900	0.7384	0.8618
	585	585	585	585	585	585	585	585
ENVI	0.00140	-0.04710	-0.01839	-0.01727	-0.00994	-0.01001	0.01815	-0.01506
	0.9731	0.2554	0.6572	0.6768	0.8104	0.8090	0.6612	0.7162
	585	585	585	585	585	585	585	585
FREN	-0.01975	0.10127	-0.03545	-0.03330	-0.01916	-0.01075	0.01499	-0.02410
	0.6335	0.0143	0.3921	0.4214	0.6437	0.7953	0.7175	0.5608
	585	585	585	585	585	585	585	585
GERM	-0.04533	-0.02978	-0.02607	-0.02449	-0.01409	-0.08341	-0.01474	0.14415
	0.2737	0.4721	0.5292	0.5545	0.7338	0.0437	0.7220	0.0005
	585	585	585	585	585	585	585	585
HIST	-0.04245	0.03336	-0.05954	0.01223	-0.03219	-0.01662	-0.05215	0.05590
	0.3054	0.4206	0.1504	0.7678	0.4372	0.6883	0.2078	0.1770
	585	585	585	585	585	585	585	585
ILA	-0.07134	0.10840	-0.04430	0.09264	-0.02395	-0.05873	0.02756	-0.03012
	0.0847	0.0087	0.2847	0.0250	0.5632	0.1560	0.5059	0.4672
	585	585	585	585	585	585	585	585
MATH	-0.05971	-0.05548	0.11318	-0.05291	-0.03045	-0.04730	-0.02213	0.06040
	0.1492	0.1802	0.0061	0.2013	0.4623	0.2534	0.5932	0.1446
	585	585	585	585	585	585	585	585

	timerank	ANTH	BIOL	CHEM	CLAS	ECON	EDUC	ENGL
CHEM	0.14510	-0.03806	-0.04184	1.00000	-0.02382	-0.03282	-0.02382	-0.05180
	0.0005	0.3581	0.3123		0.5653	0.4282	0.5653	0.2109
	577	585	585	585	585	585	585	585
CLAS	0.00174	-0.02215	-0.02435	-0.02382	1.00000	-0.01910	-0.01386	-0.03015
	0.9667	0.5928	0.5566	0.5653		0.6448	0.7379	0.4667
	577	585	585	585	585	585	585	585
ECON	0.02874	-0.03052	-0.03355	-0.03282	-0.01910	1.00000	-0.01910	-0.04154
	0.4908	0.4612	0.4179	0.4282	0.6448		0.6448	0.3159
	577	585	585	585	585	585	585	585
EDUC	-0.03574	-0.02215	-0.02435	-0.02382	-0.01386	-0.01910	1.00000	-0.03015
	0.3915	0.5928	0.5566	0.5653	0.7379	0.6448		0.4667
	577	585	585	585	585	585	585	585
ENGL	-0.06914	-0.04818	-0.05297	-0.05180	-0.03015	-0.04154	-0.03015	1.00000
	0.0971	0.2446	0.2008	0.2109	0.4667	0.3159	0.4667	
	577	585	585	585	585	585	585	585
ENVI	-0.00008	-0.01351	-0.01485	-0.01452	-0.00845	-0.01165	-0.00845	-0.01839
	0.9985	0.7444	0.7200	0.7259	0.8383	0.7786	0.8383	0.6572
	577	585	585	585	585	585	585	585
FREN	-0.00015	-0.02605	-0.02863	-0.02801	-0.01630	-0.02246	-0.01630	-0.03545
	0.9971	0.5295	0.4894	0.4990	0.6940	0.5878	0.6940	0.3921
	577	585	585	585	585	585	585	585
GERM	0.14246	-0.01915	-0.02106	-0.02059	-0.01199	-0.01651	-0.01199	-0.02607
	0.0006	0.6439	0.6113	0.6191	0.7723	0.6902	0.7723	0.5292
	577	585	585	585	585	585	585	585
HIST	0.05304	-0.04374	-0.04809	-0.04703	-0.02738	-0.03772	-0.02738	-0.05954
	0.2033	0.2909	0.2455	0.2560	0.5087	0.3625	0.5087	0.1504
	577	585	585	585	585	585	585	585
ILA	-0.00667	-0.03255	-0.03578	-0.03500	-0.02037	-0.02806	-0.02037	-0.04430
	0.8730	0.4320	0.3876	0.3981	0.6229	0.4981	0.6229	0.2847
	577	585	585	585	585	585	585	585
MATH	0.08484	-0.04139	-0.04550	-0.04450	-0.02590	-0.03568	-0.02590	-0.05633
	0.0416	0.3177	0.2719	0.2826	0.5318	0.3890	0.5318	0.1736
	577	585	585	585	585	585	585	585

	ENVI	FREN	GERM	HIST	ILA	MATH	MIDD	MUAH
CHEM	-0.01452	-0.02801	-0.02059	-0.04703	-0.03500	-0.04450	-0.02529	-0.04184
	0.7259	0.4990	0.6191	0.2560	0.3981	0.2826	0.5416	0.3123
	585	585	585	585	585	585	585	585
CLAS	-0.00845	-0.01630	-0.01199	-0.02738	-0.02037	-0.02590	-0.01472	-0.02435
	0.8383	0.6940	0.7723	0.5087	0.6229	0.5318	0.7224	0.5566
	585	585	585	585	585	585	585	585
ECON	-0.01165	-0.02246	-0.01651	-0.03772	-0.02806	-0.03568	-0.02028	-0.03355
	0.7786	0.5878	0.6902	0.3625	0.4981	0.3890	0.6245	0.4179
	585	585	585	585	585	585	585	585
EDUC	-0.00845	-0.01630	-0.01199	-0.02738	-0.02037	-0.02590	-0.01472	-0.02435
	0.8383	0.6940	0.7723	0.5087	0.6229	0.5318	0.7224	0.5566
	585	585	585	585	585	585	585	585
ENGL	-0.01839	-0.03545	-0.02607	-0.05954	-0.04430	-0.05633	-0.03201	-0.05297
	0.6572	0.3921	0.5292	0.1504	0.2847	0.1736	0.4397	0.2008
	585	585	585	585	585	585	585	585
ENVI	1.00000	-0.00994	-0.00731	-0.01669	-0.01242	-0.01579	-0.00897	-0.01485
		0.8104	0.8600	0.6870	0.7643	0.7031	0.8285	0.7200
	585	585	585	585	585	585	585	585
FREN	-0.00994	1.00000	-0.01409	-0.03219	-0.02395	-0.03045	-0.01730	-0.02863
	0.8104		0.7338	0.4372	0.5632	0.4623	0.6762	0.4894
	585	585	585	585	585	585	585	585
GERM	-0.00731	-0.01409	1.00000	-0.02367	-0.01761	-0.02239	-0.01272	-0.02106
	0.8600	0.7338		0.5678	0.6708	0.5888	0.7587	0.6113
	585	585	585	585	585	585	585	585
HIST	-0.01669	-0.03219	-0.02367	1.00000	-0.04022	-0.05114	-0.02906	-0.04809
	0.6870	0.4372	0.5678		0.3315	0.2168	0.4830	0.2455
	585	585	585	585	585	585	585	585
ILA	-0.01242	-0.02395	-0.01761	-0.04022	1.00000	-0.03806	-0.02163	-0.03578
	0.7643	0.5632	0.6708	0.3315		0.3582	0.6017	0.3876
	585	585	585	585	585	585	585	585
MATH	-0.01579	-0.03045	-0.02239	-0.05114	-0.03806	1.00000	-0.02750	-0.04550
	0.7031	0.4623	0.5888	0.2168	0.3582		0.5068	0.2719
	585	585	585	585	585	585	585	585

	PHIL	PHED	PHYS	POLS	PSYC	REAL	RELI	SOCI
CHEM	-0.03500	-0.02928	-0.03392	-0.04703	-0.04703	-0.01878	-0.03392	-0.03392
	0.3981	0.4797	0.4128	0.2560	0.2560	0.6503	0.4128	0.4128
	585	585	585	585	585	585	585	585
CLAS	-0.02037	-0.01704	-0.01975	-0.02738	-0.02738	-0.01093	-0.01975	-0.01975
	0.6229	0.6809	0.6336	0.5087	0.5087	0.7919	0.6336	0.6336
	585	585	585	585	585	585	585	585
ECON	-0.02806	-0.02348	-0.02720	-0.03772	-0.03772	-0.01506	-0.02720	-0.02720
	0.4981	0.5709	0.5114	0.3625	0.3625	0.7162	0.5114	0.5114
	585	585	585	585	585	585	585	585
EDUC	-0.02037	-0.01704	-0.01975	-0.02738	-0.02738	-0.01093	-0.01975	-0.01975
	0.6229	0.6809	0.6336	0.5087	0.5087	0.7919	0.6336	0.6336
	585	585	585	585	585	585	585	585
ENGL	-0.04430	-0.03706	-0.04294	-0.05954	-0.05954	-0.02378	-0.04294	-0.04294
	0.2847	0.3709	0.2998	0.1504	0.1504	0.5660	0.2998	0.2998
	585	585	585	585	585	585	585	585
ENVI	-0.01242	-0.01039	-0.01204	-0.01669	-0.01669	-0.00667	-0.01204	-0.01204
	0.7643	0.8020	0.7714	0.6870	0.6870	0.8722	0.7714	0.7714
	585	585	585	585	585	585	585	585
FREN	-0.02395	-0.02003	-0.02321	-0.03219	-0.03219	-0.01285	-0.02321	-0.02321
	0.5632	0.6287	0.5752	0.4372	0.4372	0.7564	0.5752	0.5752
	585	585	585	585	585	585	585	585
GERM	-0.01761	-0.01473	-0.01707	-0.02367	-0.02367	-0.00945	-0.01707	-0.01707
	0.6708	0.7222	0.6803	0.5678	0.5678	0.8196	0.6803	0.6803
	585	585	585	585	585	585	585	585
HIST	-0.04022	-0.03365	-0.03899	-0.05405	-0.05405	-0.02159	-0.03899	-0.03899
	0.3315	0.4166	0.3465	0.1917	0.1917	0.6023	0.3465	0.3465
	585	585	585	585	585	585	585	585
ILA	-0.02993	-0.02504	-0.02901	-0.04022	-0.04022	-0.01606	-0.02901	-0.02901
	0.4700	0.5456	0.4837	0.3315	0.3315	0.6982	0.4837	0.4837
	585	585	585	585	585	585	585	585
MATH	-0.03806	-0.03183	-0.03689	-0.05114	-0.05114	-0.02042	-0.03689	-0.03689
	0.3582	0.4422	0.3732	0.2168	0.2168	0.6220	0.3732	0.3732
	585	585	585	585	585	585	585	585

	SPAN	THEA	BUS	SPH	LAW	OXF	DISTING	MNADM
CHEM	-0.02668	-0.02226	-0.05840	-0.06319	-0.04785	0.05172	0.11023	-0.03816
	0.5196	0.5910	0.1583	0.1269	0.2478	0.2117	0.0076	0.3569
	585	585	585	585	585	585	585	585
CLAS	-0.01553	-0.01296	-0.03399	-0.03678	-0.02785	-0.03147	-0.04988	0.12156
	0.7078	0.7545	0.4119	0.3746	0.5013	0.4474	0.2284	0.0032
	585	585	585	585	585	585	585	585
ECON	-0.02139	-0.01785	-0.04683	-0.05067	-0.03837	0.00000	-0.06872	-0.00274
	0.6056	0.6665	0.2581	0.2211	0.3542	1.0000	0.0968	0.9473
	585	585	585	585	585	585	585	585
EDUC	-0.01553	-0.01296	-0.03399	-0.03678	-0.02785	-0.03147	-0.00890	0.01255
	0.7078	0.7545	0.4119	0.3746	0.5013	0.4474	0.8300	0.7620
	585	585	585	585	585	585	585	585
ENGL	-0.03377	-0.02818	-0.07392	-0.07998	-0.06057	0.07414	0.01036	0.04485
	0.4149	0.4963	0.0740	0.0532	0.1434	0.0732	0.8026	0.2788
	585	585	585	585	585	585	585	585
ENVI	-0.00947	-0.00790	-0.02073	-0.02243	-0.01698	-0.01919	-0.03041	0.08151
	0.8192	0.8488	0.6169	0.5883	0.6819	0.6433	0.4628	0.0488
	585	585	585	585	585	585	585	585
FREN	-0.01826	-0.01523	-0.03996	-0.04324	-0.03275	0.01345	0.01144	0.02252
	0.6595	0.7131	0.3346	0.2965	0.4292	0.7454	0.7825	0.5867
	585	585	585	585	585	585	585	585
GERM	-0.01342	-0.01120	-0.02939	-0.03180	-0.02408	0.04081	-0.04312	0.03179
	0.7459	0.7869	0.4781	0.4427	0.5611	0.3244	0.2978	0.4428
	585	585	585	585	585	585	585	585
HIST	-0.03066	-0.02559	-0.06712	-0.07262	-0.05500	0.00000	0.05256	-0.00392
	0.4592	0.5368	0.1049	0.0793	0.1841	1.0000	0.2043	0.9245
	585	585	585	585	585	585	585	585
ILA	-0.02281	-0.01904	-0.04994	-0.05404	-0.04092	-0.04624	-0.01661	0.03728
	0.5818	0.6458	0.2278	0.1918	0.3231	0.2642	0.6884	0.3681
	585	585	585	585	585	585	585	585
MATH	-0.02901	-0.02421	-0.06350	-0.06871	-0.05203	0.07185	-0.04781	-0.07210
	0.4838	0.5590	0.1250	0.0969	0.2089	0.0825	0.2483	0.0814
	585	585	585	585	585	585	585	585

	sal9mo	FEMALE	ASIAN	BLACK	HISP	FULL	ASSI	EMexper
MIDD	-0.07770	-0.05171	-0.03201	-0.03007	-0.01730	-0.07410	-0.00153	-0.03963
	0.0604	0.2117	0.4397	0.4679	0.6762	0.0733	0.9706	0.3387
	585	585	585	585	585	585	585	585
MUAH	-0.12764	0.08981	-0.01710	-0.01186	-0.02863	-0.09917	0.03174	-0.02307
	0.0020	0.0299	0.6797	0.7748	0.4894	0.0164	0.4435	0.5776
	585	585	585	585	585	585	585	585
PHIL	-0.00464	-0.04692	-0.04430	-0.04162	-0.02395	0.04506	-0.04528	0.02334
	0.9108	0.2572	0.2847	0.3150	0.5632	0.2765	0.2742	0.5732
	585	585	585	585	585	585	585	585
PHED	-0.10888	0.08913	0.01312	-0.03481	0.06875	-0.02018	-0.02095	0.11830
	0.0084	0.0311	0.7514	0.4007	0.0967	0.6261	0.6130	0.0042
	585	585	585	585	585	585	585	585
PHYS	-0.03498	-0.08715	0.13151	-0.04034	-0.02321	-0.00914	0.00906	0.09889
	0.3984	0.0351	0.0014	0.3301	0.5752	0.8255	0.8269	0.0167
	585	585	585	585	585	585	585	585
POLS	-0.06742	-0.10182	-0.05954	0.01223	0.02487	-0.04824	0.04030	0.00937
	0.1033	0.0137	0.1504	0.7678	0.5483	0.2441	0.3305	0.8210
	585	585	585	585	585	585	585	585
PSYC	0.00289	-0.00043	-0.05954	0.01223	-0.03219	0.10985	-0.03366	0.11322
	0.9444	0.9917	0.1504	0.7678	0.4372	0.0078	0.4164	0.0061
	585	585	585	585	585	585	585	585
REAL	-0.04679	0.06056	0.05350	-0.02233	-0.01285	-0.03820	0.03825	-0.03010
	0.2585	0.1435	0.1963	0.5898	0.7564	0.3564	0.3558	0.4675
	585	585	585	585	585	585	585	585
RELI	-0.05047	-0.01859	-0.04294	0.00575	-0.02321	0.01224	-0.04095	-0.07526
	0.2228	0.6536	0.2998	0.8896	0.5752	0.7676	0.3228	0.0689
	585	585	585	585	585	585	585	585
SOCI	-0.07013	0.04996	-0.04294	0.00575	-0.02321	0.01224	0.03407	-0.00672
	0.0902	0.2276	0.2998	0.8896	0.5752	0.7676	0.4108	0.8711
	585	585	585	585	585	585	585	585
SPAN	-0.10620	0.05726	-0.03377	-0.03172	0.27301	-0.08116	0.08579	-0.06961
	0.0102	0.1666	0.4149	0.4438	<.0001	0.0498	0.0380	0.0926
	585	585	585	585	585	585	585	585

	timerank	ANTH	BIOL	CHEM	CLAS	ECON	EDUC	ENGL
MIDD	-0.04965	-0.02352	-0.02585	-0.02529	-0.01472	-0.02028	-0.01472	-0.03201
	0.2337	0.5702	0.5326	0.5416	0.7224	0.6245	0.7224	0.4397
	577	585	585	585	585	585	585	585
MUAH	-0.04852	-0.03891	-0.04278	-0.04184	-0.02435	-0.03355	-0.02435	-0.05297
	0.2446	0.3474	0.3016	0.3123	0.5566	0.4179	0.5566	0.2008
	577	585	585	585	585	585	585	585
PHIL	0.01536	-0.03255	-0.03578	-0.03500	-0.02037	-0.02806	-0.02037	-0.04430
	0.7127	0.4320	0.3876	0.3981	0.6229	0.4981	0.6229	0.2847
	577	585	585	585	585	585	585	585
PHED	0.02748	-0.02723	-0.02993	-0.02928	-0.01704	-0.02348	-0.01704	-0.03706
	0.5100	0.5110	0.4699	0.4797	0.6809	0.5709	0.6809	0.3709
	577	585	585	585	585	585	585	585
PHYS	0.12660	-0.03155	-0.03468	-0.03392	-0.01975	-0.02720	-0.01975	-0.04294
	0.0023	0.4463	0.4024	0.4128	0.6336	0.5114	0.6336	0.2998
	577	585	585	585	585	585	585	585
POLS	0.00567	-0.04374	-0.04809	-0.04703	-0.02738	-0.03772	-0.02738	-0.05954
	0.8920	0.2909	0.2455	0.2560	0.5087	0.3625	0.5087	0.1504
	577	585	585	585	585	585	585	585
PSYC	0.08068	-0.04374	-0.04809	-0.04703	-0.02738	-0.03772	-0.02738	-0.05954
	0.0527	0.2909	0.2455	0.2560	0.5087	0.3625	0.5087	0.1504
	577	585	585	585	585	585	585	585
REAL	-0.04502	-0.01747	-0.01920	-0.01878	-0.01093	-0.01506	-0.01093	-0.02378
	0.2803	0.6733	0.6430	0.6503	0.7919	0.7162	0.7919	0.5660
	577	585	585	585	585	585	585	585
RELI	-0.04823	-0.03155	-0.03468	-0.03392	-0.01975	-0.02720	-0.01975	-0.04294
	0.2474	0.4463	0.4024	0.4128	0.6336	0.5114	0.6336	0.2998
	577	585	585	585	585	585	585	585
SOCI	-0.04022	-0.03155	-0.03468	-0.03392	-0.01975	-0.02720	-0.01975	-0.04294
	0.3348	0.4463	0.4024	0.4128	0.6336	0.5114	0.6336	0.2998
	577	585	585	585	585	585	585	585
SPAN	-0.04716	-0.02481	-0.02728	-0.02668	-0.01553	-0.02139	-0.01553	-0.03377
	0.2580	0.5492	0.5103	0.5196	0.7078	0.6056	0.7078	0.4149
	577	585	585	585	585	585	585	585

	ENVI	FREN	GERM	HIST	ILA	MATH	MIDD	MUAH
MIDD	-0.00897	-0.01730	-0.01272	-0.02906	-0.02163	-0.02750	1.00000	-0.02585
	0.8285	0.6762	0.7587	0.4830	0.6017	0.5068		0.5326
	585	585	585	585	585	585	585	585
MUAH	-0.01485	-0.02863	-0.02106	-0.04809	-0.03578	-0.04550	-0.02585	1.00000
	0.7200	0.4894	0.6113	0.2455	0.3876	0.2719	0.5326	
	585	585	585	585	585	585	585	585
PHIL	-0.01242	-0.02395	-0.01761	-0.04022	-0.02993	-0.03806	-0.02163	-0.03578
	0.7643	0.5632	0.6708	0.3315	0.4700	0.3582	0.6017	0.3876
	585	585	585	585	585	585	585	585
PHED	-0.01039	-0.02003	-0.01473	-0.03365	-0.02504	-0.03183	-0.01809	-0.02993
	0.8020	0.6287	0.7222	0.4166	0.5456	0.4422	0.6624	0.4699
	585	585	585	585	585	585	585	585
PHYS	-0.01204	-0.02321	-0.01707	-0.03899	-0.02901	-0.03689	-0.02096	-0.03468
	0.7714	0.5752	0.6803	0.3465	0.4837	0.3732	0.6129	0.4024
	585	585	585	585	585	585	585	585
POLS	-0.01669	-0.03219	-0.02367	-0.05405	-0.04022	-0.05114	-0.02906	-0.04809
	0.6870	0.4372	0.5678	0.1917	0.3315	0.2168	0.4830	0.2455
	585	585	585	585	585	585	585	585
PSYC	-0.01669	-0.03219	-0.02367	-0.05405	-0.04022	-0.05114	-0.02906	-0.04809
	0.6870	0.4372	0.5678	0.1917	0.3315	0.2168	0.4830	0.2455
	585	585	585	585	585	585	585	585
REAL	-0.00667	-0.01285	-0.00945	-0.02159	-0.01606	-0.02042	-0.01161	-0.01920
	0.8722	0.7564	0.8196	0.6023	0.6982	0.6220	0.7794	0.6430
	585	585	585	585	585	585	585	585
RELI	-0.01204	-0.02321	-0.01707	-0.03899	-0.02901	-0.03689	-0.02096	-0.03468
	0.7714	0.5752	0.6803	0.3465	0.4837	0.3732	0.6129	0.4024
	585	585	585	585	585	585	585	585
SOCI	-0.01204	-0.02321	-0.01707	-0.03899	-0.02901	-0.03689	-0.02096	-0.03468
	0.7714	0.5752	0.6803	0.3465	0.4837	0.3732	0.6129	0.4024
	585	585	585	585	585	585	585	585
SPAN	-0.00947	-0.01826	-0.01342	-0.03066	-0.02281	-0.02901	-0.01648	-0.02728
	0.8192	0.6595	0.7459	0.4592	0.5818	0.4838	0.6907	0.5103
	585	585	585	585	585	585	585	585

	PHIL	PHED	PHYS	POLS	PSYC	REAL	RELI	SOCI
MIDD	-0.02163	-0.01809	-0.02096	-0.02906	-0.02906	-0.01161	-0.02096	-0.02096
	0.6017	0.6624	0.6129	0.4830	0.4830	0.7794	0.6129	0.6129
	585	585	585	585	585	585	585	585
MUAH	-0.03578	-0.02993	-0.03468	-0.04809	-0.04809	-0.01920	-0.03468	-0.03468
	0.3876	0.4699	0.4024	0.2455	0.2455	0.6430	0.4024	0.4024
	585	585	585	585	585	585	585	585
PHIL	1.00000	-0.02504	-0.02901	-0.04022	-0.04022	-0.01606	-0.02901	-0.02901
		0.5456	0.4837	0.3315	0.3315	0.6982	0.4837	0.4837
	585	585	585	585	585	585	585	585
PHED	-0.02504	1.00000	-0.02427	-0.03365	-0.03365	-0.01344	-0.02427	-0.02427
	0.5456		0.5580	0.4166	0.4166	0.7457	0.5580	0.5580
	585	585	585	585	585	585	585	585
PHYS	-0.02901	-0.02427	1.00000	-0.03899	-0.03899	-0.01557	-0.02812	-0.02812
	0.4837	0.5580		0.3465	0.3465	0.7071	0.4973	0.4973
	585	585	585	585	585	585	585	585
POLS	-0.04022	-0.03365	-0.03899	1.00000	-0.05405	-0.02159	-0.03899	-0.03899
	0.3315	0.4166	0.3465		0.1917	0.6023	0.3465	0.3465
	585	585	585	585	585	585	585	585
PSYC	-0.04022	-0.03365	-0.03899	-0.05405	1.00000	-0.02159	-0.03899	-0.03899
	0.3315	0.4166	0.3465	0.1917		0.6023	0.3465	0.3465
	585	585	585	585	585	585	585	585
REAL	-0.01606	-0.01344	-0.01557	-0.02159	-0.02159	1.00000	-0.01557	-0.01557
	0.6982	0.7457	0.7071	0.6023	0.6023		0.7071	0.7071
	585	585	585	585	585	585	585	585
RELI	-0.02901	-0.02427	-0.02812	-0.03899	-0.03899	-0.01557	1.00000	-0.02812
	0.4837	0.5580	0.4973	0.3465	0.3465	0.7071		0.4973
	585	585	585	585	585	585	585	585
SOCI	-0.02901	-0.02427	-0.02812	-0.03899	-0.03899	-0.01557	-0.02812	1.00000
	0.4837	0.5580	0.4973	0.3465	0.3465	0.7071	0.4973	
	585	585	585	585	585	585	585	585
SPAN	-0.02281	-0.01908	-0.02211	-0.03066	-0.03066	-0.01224	-0.02211	-0.02211
	0.5818	0.6451	0.5935	0.4592	0.4592	0.7676	0.5935	0.5935
	585	585	585	585	585	585	585	585

	SPAN	THEA	BUS	SPH	LAW	OXF	DISTING	MNADM
MIDD	-0.01648	-0.01376	-0.03608	-0.03904	-0.02957	-0.03341	-0.05295	-0.02954
	0.6907	0.7399	0.3837	0.3458	0.4753	0.4199	0.2010	0.4757
	585	585	585	585	585	585	585	585
MUAH	-0.02728	-0.02276	-0.05971	-0.06460	-0.04893	-0.05528	-0.06362	-0.02051
	0.5103	0.5827	0.1492	0.1186	0.2374	0.1818	0.1243	0.6205
	585	585	585	585	585	585	585	585
PHIL	-0.02281	-0.01904	-0.04994	-0.05404	-0.04092	-0.00544	0.06839	-0.01297
	0.5818	0.6458	0.2278	0.1918	0.3231	0.8955	0.0984	0.7542
	585	585	585	585	585	585	585	585
PHED	-0.01908	-0.01593	-0.04178	-0.04520	-0.03423	0.15471	-0.06130	0.04520
	0.6451	0.7007	0.3131	0.2751	0.4086	0.0002	0.1386	0.2751
	585	585	585	585	585	585	585	585
PHYS	-0.02211	-0.01845	-0.04841	-0.05238	-0.03967	0.03921	0.04569	-0.03388
	0.5935	0.6560	0.2424	0.2059	0.3382	0.3437	0.2699	0.4134
	585	585	585	585	585	585	585	585
POLS	-0.03066	-0.02559	-0.06712	-0.07262	-0.05500	0.00000	0.00941	-0.02306
	0.4592	0.5368	0.1049	0.0793	0.1841	1.0000	0.8204	0.5778
	585	585	585	585	585	585	585	585
PSYC	-0.03066	-0.02559	-0.06712	-0.07262	-0.05500	0.03107	0.05256	-0.04219
	0.4592	0.5368	0.1049	0.0793	0.1841	0.4532	0.2043	0.3083
	585	585	585	585	585	585	585	585
REAL	-0.01224	-0.01022	-0.02680	-0.02900	-0.02196	-0.02481	0.01237	0.04428
	0.7676	0.8052	0.5176	0.4839	0.5960	0.5492	0.7652	0.2850
	585	585	585	585	585	585	585	585
RELI	-0.02211	-0.01845	-0.04841	-0.05238	-0.03967	0.03921	0.04569	0.04375
	0.5935	0.6560	0.2424	0.2059	0.3382	0.3437	0.2699	0.2908
	585	585	585	585	585	585	585	585
SOCI	-0.02211	-0.01845	-0.04841	-0.05238	-0.03967	-0.00280	-0.07103	-0.00801
	0.5935	0.6560	0.2424	0.2059	0.3382	0.9461	0.0861	0.8468
	585	585	585	585	585	585	585	585
SPAN	1.00000	-0.01451	-0.03807	-0.04119	-0.03120	0.01762	-0.05586	-0.00223
		0.7261	0.3580	0.3199	0.4514	0.6706	0.1772	0.9571
	585	585	585	585	585	585	585	585

	sal9mo	FEMALE	ASIAN	BLACK	HISP	FULL	ASSI	EMexper
THEA	-0.03682	-0.00363	-0.02818	-0.02647	-0.01523	-0.05811	-0.05970	-0.01242
	0.3740	0.9301	0.4963	0.5228	0.7131	0.1604	0.1493	0.7644
	585	585	585	585	585	585	585	585
BUS	0.32669	-0.04949	0.21971	0.01519	0.14895	-0.05335	0.13422	-0.18022
	<.0001	0.2320	<.0001	0.7139	0.0003	0.1976	0.0011	<.0001
	585	585	585	585	585	585	585	585
SPH	0.10384	0.05704	-0.02999	-0.02231	0.00098	0.01361	-0.05478	-0.07112
	0.0120	0.1682	0.4690	0.5903	0.9811	0.7425	0.1858	0.0857
	585	585	585	585	585	585	585	585
LAW	0.31085	-0.08862	-0.06057	0.04377	-0.03275	0.17973	-0.11011	0.05371
	<.0001	0.0321	0.1434	0.2906	0.4292	<.0001	0.0077	0.1946
	585	585	585	585	585	585	585	585
OXF	-0.26398	0.06375	-0.01141	-0.03415	0.01345	-0.12115	-0.01417	-0.00098
	<.0001	0.1235	0.7831	0.4096	0.7454	0.0033	0.7323	0.9811
	585	585	585	585	585	585	585	585
DISTING	0.56105	-0.14296	0.03017	0.04462	-0.02360	0.45871	-0.22978	0.11504
	<.0001	0.0005	0.4665	0.2813	0.5689	<.0001	<.0001	0.0053
	585	585	585	585	585	585	585	585
MNADM	0.28912	-0.06813	-0.09564	-0.04860	0.02252	0.22721	-0.27701	0.18481
	<.0001	0.0997	0.0207	0.2405	0.5867	<.0001	<.0001	<.0001
	585	585	585	585	585	585	585	585

	timerank	ANTH	BIOL	CHEM	CLAS	ECON	EDUC	ENGL
THEA	0.04592	-0.02071	-0.02276	-0.02226	-0.01296	-0.01785	-0.01296	-0.02818
	0.2708	0.6172	0.5827	0.5910	0.7545	0.6665	0.7545	0.4963
	577	585	585	585	585	585	585	585
BUS	-0.11463	-0.05431	-0.05971	-0.05840	-0.03399	-0.04683	-0.03399	-0.07392
	0.0058	0.1896	0.1492	0.1583	0.4119	0.2581	0.4119	0.0740
	577	585	585	585	585	585	585	585
SPH	-0.10110	-0.05877	-0.06460	-0.06319	-0.03678	-0.05067	-0.03678	-0.07998
	0.0151	0.1557	0.1186	0.1269	0.3746	0.2211	0.3746	0.0532
	577	585	585	585	585	585	585	585
LAW	0.04250	-0.04451	-0.04893	-0.04785	-0.02785	-0.03837	-0.02785	-0.06057
	0.3081	0.2825	0.2374	0.2478	0.5013	0.3542	0.5013	0.1434
	577	585	585	585	585	585	585	585
OXF	-0.04132	0.02514	0.04837	0.05172	-0.03147	0.00000	-0.03147	0.07414
	0.3218	0.5439	0.2428	0.2117	0.4474	1.0000	0.4474	0.0732
	577	585	585	585	585	585	585	585
DISTING	0.24646	-0.02731	0.00837	0.11023	-0.04988	-0.06872	-0.00890	0.01036
	<.0001	0.5097	0.8399	0.0076	0.2284	0.0968	0.8300	0.8026
	577	585	585	585	585	585	585	585
MNADM	0.15813	0.02005	-0.04179	-0.03816	0.12156	-0.00274	0.01255	0.04485
	0.0001	0.6284	0.3129	0.3569	0.0032	0.9473	0.7620	0.2788
	577	585	585	585	585	585	585	585

	ENVI	FREN	GERM	HIST	ILA	MATH	MIDD	MUAH
THEA	-0.00790	-0.01523	-0.01120	-0.02559	-0.01904	-0.02421	-0.01376	-0.02276
	0.8488	0.7131	0.7869	0.5368	0.6458	0.5590	0.7399	0.5827
	585	585	585	585	585	585	585	585
BUS	-0.02073	-0.03996	-0.02939	-0.06712	-0.04994	-0.06350	-0.03608	-0.05971
	0.6169	0.3346	0.4781	0.1049	0.2278	0.1250	0.3837	0.1492
	585	585	585	585	585	585	585	585
SPH	-0.02243	-0.04324	-0.03180	-0.07262	-0.05404	-0.06871	-0.03904	-0.06460
	0.5883	0.2965	0.4427	0.0793	0.1918	0.0969	0.3458	0.1186
	585	585	585	585	585	585	585	585
LAW	-0.01698	-0.03275	-0.02408	-0.05500	-0.04092	-0.05203	-0.02957	-0.04893
	0.6819	0.4292	0.5611	0.1841	0.3231	0.2089	0.4753	0.2374
	585	585	585	585	585	585	585	585

	ENVI	FREN	GERM	HIST	ILA	MATH	MIDD	MUAH
OXF	-0.01919	0.01345	0.04081	0.00000	-0.04624	0.07185	-0.03341	-0.05528
	0.6433	0.7454	0.3244	1.0000	0.2642	0.0825	0.4199	0.1818
	585	585	585	585	585	585	585	585
DISTING	-0.03041	0.01144	-0.04312	0.05256	-0.01661	-0.04781	-0.05295	-0.06362
	0.4628	0.7825	0.2978	0.2043	0.6884	0.2483	0.2010	0.1243
	585	585	585	585	585	585	585	585
MNADM	0.08151	0.02252	0.03179	-0.00392	0.03728	-0.07210	-0.02954	-0.02051
	0.0488	0.5867	0.4428	0.9245	0.3681	0.0814	0.4757	0.6205
	585	585	585	585	585	585	585	585

	PHIL	PHED	PHYS	POLS	PSYC	REAL	RELI	SOCI
THEA	-0.01904	-0.01593	-0.01845	-0.02559	-0.02559	-0.01022	-0.01845	-0.01845
	0.6458	0.7007	0.6560	0.5368	0.5368	0.8052	0.6560	0.6560
	585	585	585	585	585	585	585	585
BUS	-0.04994	-0.04178	-0.04841	-0.06712	-0.06712	-0.02680	-0.04841	-0.04841
	0.2278	0.3131	0.2424	0.1049	0.1049	0.5176	0.2424	0.2424
	585	585	585	585	585	585	585	585
SPH	-0.05404	-0.04520	-0.05238	-0.07262	-0.07262	-0.02900	-0.05238	-0.05238
	0.1918	0.2751	0.2059	0.0793	0.0793	0.4839	0.2059	0.2059
	585	585	585	585	585	585	585	585
LAW	-0.04092	-0.03423	-0.03967	-0.05500	-0.05500	-0.02196	-0.03967	-0.03967
	0.3231	0.4086	0.3382	0.1841	0.1841	0.5960	0.3382	0.3382
	585	585	585	585	585	585	585	585
OXF	-0.00544	0.15471	0.03921	0.00000	0.03107	-0.02481	0.03921	-0.00280
	0.8955	0.0002	0.3437	1.0000	0.4532	0.5492	0.3437	0.9461
	585	585	585	585	585	585	585	585
DISTING	0.06839	-0.06130	0.04569	0.00941	0.05256	0.01237	0.04569	-0.07103
	0.0984	0.1386	0.2699	0.8204	0.2043	0.7652	0.2699	0.0861
	585	585	585	585	585	585	585	585
MNADM	-0.01297	0.04520	-0.03388	-0.02306	-0.04219	0.04428	0.04375	-0.00801
	0.7542	0.2751	0.4134	0.5778	0.3083	0.2850	0.2908	0.8468
	585	585	585	585	585	585	585	585

	SPAN	THEA	BUS	SPH	LAW	OXF	DISTING	MNADM
THEA	-0.01451	1.00000	-0.03177	-0.03437	-0.02603	-0.02941	-0.04662	0.06025
	0.7261		0.4431	0.4066	0.5297	0.4777	0.2603	0.1456
	585	585	585	585	585	585	585	585
BUS	-0.03807	-0.03177	1.00000	-0.09017	-0.06829	-0.07715	-0.01511	0.01096
	0.3580	0.4431		0.0292	0.0989	0.0622	0.7153	0.7913
	585	585	585	585	585	585	585	585
SPH	-0.04119	-0.03437	-0.09017	1.00000	-0.07389	-0.08348	-0.04869	0.01846
	0.3199	0.4066	0.0292		0.0741	0.0436	0.2397	0.6560
	585	585	585	585	585	585	585	585
LAW	-0.03120	-0.02603	-0.06829	-0.07389	1.00000	-0.06322	0.11226	-0.08312
	0.4514	0.5297	0.0989	0.0741		0.1267	0.0066	0.0445
	585	585	585	585	585	585	585	585
OXF	0.01762	-0.02941	-0.07715	-0.08348	-0.06322	1.00000	-0.07505	-0.00113
	0.6706	0.4777	0.0622	0.0436	0.1267		0.0697	0.9783
	585	585	585	585	585	585	585	585
DISTING	-0.05586	-0.04662	-0.01511	-0.04869	0.11226	-0.07505	1.00000	0.13621
	0.1772	0.2603	0.7153	0.2397	0.0066	0.0697		0.0010
	585	585	585	585	585	585	585	585
MNADM	-0.00223	0.06025	0.01096	0.01846	-0.08312	-0.00113	0.13621	1.00000
	0.9571	0.1456	0.7913	0.6560	0.0445	0.9783	0.0010	
	585	585	585	585	585	585	585	585