DOCUMENT RESUME

ED 138 196 HE 008 861

AUTHOR Toombs, William; Sams, Henry
TITLE Effects of Extra-Departmental Associations on Promotion Among Research Faculty.
PUB DATE 7 Apr 77
NOTE 21p.; Paper presented at the annual meeting of the American Educational Research Association (New York City, April, 1977)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS *Administrative Personnel; Age; *College Faculty; *Faculty Promotion; Faculty Workload; Noninstructional Responsibility; *Professional Associations; *Researchers; Specialization; *Teaching

ABSTRACT

The relationship between advancement in academic rank and various kinds of professional associations was empirically explored. Ten percent of the active research faculty at a large university were surveyed. Using statistical analyses, academic rank was correlated separately with two types of associations: five internal affiliations one might hold in addition to a regular faculty appointment, and five external professional associations. Three career stages were established on the basis of age (under 40 years; 40 to 54 years, and over) and data reported under these headings. Findings showed that the effects of extra-faculty associations differ substantially among the three career groups. In the early career stage, internal attachments were more closely associated with rank, but diversions from the discipline line slowed promotion. In the middle years, three distinct career lines appeared (teacher-scholar, academic administrator, and research specialist) and each option related favorably to promotion. At this stage, national participation in panels, juries, or reading committees was the strongest factor for advancement. In the later career years, outside associations carried little weight and were largely negative. Internal associations were significant at this stage, but unconventional associations and joint faculty relationships had sidetracking effects. (Author/MSE)

EFFECTS OF EXTRA-DEPARTMENTAL ASSOCIATIONS ON PROMOTION AMONG RESEARCH FACULTY

William Toombs
The Center for the Study of Higher Education
The Pennsylvania State University

Henry Sams
Associate Dean of the Graduate School
The Pennsylvania State University

Prepared for
1977 AERA Meeting
New York, New York
April 7, 1977

22.07

EFFECTS OF EXTRA-DEPARTMENTAL ASSOCIATIONS ON PROMOTION AMONG RESEARCH FACULTY

W. Toombs, H.W. Sams

Beliefs about the effects participation in interdisciplinary activities or in the administrative chores of a university may have on one's chances for professional progress are an established part of academic lore.[1] However, there is ambiguity in these beliefs and it has been sharpened by recent discussion. On one hand a necessity for more interdisciplinary research to address societal problems and unlock new areas of knowledge is presented (Sternberg 1974). It is argued further that new organizational units on the campus and a reorientation of faculty toward interdisciplinary work is the avenue to a renewal of academic research. Under this view an interdisciplinary association is seen to have a benign, even mildly beneficial, influence on promotion.

An opposing view, equally partisan in tone, holds that the department, functioning as an agency of the discipline, has the power and obligation to resist institutionalized forms of interdisciplinarity (Straus 1973). The essential structure of knowledge and inquiry is improved primarily by individuals working within the fruitful interrelationship of intellect and administration provided by the disciplinary department. An examination of written reactions to these ideas provided by individual faculty members in a study of research in the setting of a complex university reveals

[1]This study was partly supported by the National Science Foundation under the Research Management Improvement program.

few neutrals and many firm conclusions on either side of the question (Sams 1975). Somehow the division of views has reached a state of intractibility that makes temperate examination of the issues a rarity.

Light (1974) offers an observation that may explain both the strong indivfdual views of faculty and the difficulty of making an organizational commitment to interdisciplinarity on a permanent basis. "While most other professions have several career models for their members, the academic profession has only one. . . . (it) focuses almost exclusively on the ideal of the research professor and evidence indicates they are characterized by single-channel mobility." With few obvious exceptions like engineering, that channel lies within an academic discipline. In short, any consideration of permanent organizational adjustment in the university to accommodate the requirements of interdisciplinarity is retarded by the intervention of strong faculty beliefs, largely unexamined, about the narrow path of professional advancement.

Certainly there are a great many variables and even a few mysteries to the process of academic promotion but the question of how advancement in rank has been related to various kinds of professional attachments does lend itself to exploratory empirical examination. The data in these pages report the relationship between academic rank and a group of associations held in addition to a regular faculty appointment. Attachments of both intra-mural and extra-mural types are dealt with. Scholarly, administrative and research affiliations are included. The general question is: "How are promotional chances as reflected in current rank/age structure related to various kinds of associations?"

A basic line of argument is that any extra-disciplinary attachment has a dissociating effect on one's professional activities and, consequently, slows advancement on the career ladder as symbolized by promotion. The supporting points are well known: Peer judgments are at the heart of the selection process. Through interdisciplinary participation one loses touch with peers who will be called upon to evaluate. Products of interdisciplinary efforts cannot be fully evaluated by disciplinary criteria therefore, they are set aside or downgraded. As one respondent put it, they are perceived as having "less rigor" than projects within the discipline. To some degree one loses touch with the development of knowledge and technique of the field in ways that cannot be made up. By gaining more information about the relationship between promotion and various kinds of options available to a faculty member some of these points may be refuted or supported.

SAMPLE AND PROCEDURES

Data for this analysis was gathered from a sample of "active research faculty" at The Pennsylvnaia State University. The full study involved extensive interviews with research administrators on campus and at other institutions or agencies, along with a variety of exchanges with individual faculty members (Sams 1975). From a total faculty of 3200 members all those who had published results or otherwise reported any research endeavors within a two year period were identified, a subpopulation of 2100 "active research faculty." By use of random number assignments a ten percent sample was selected to receive a survey instrument. The protocol was part of a larger investigation into the values, behaviors,

and opinions of faculty engaged in research. This responding group reflects the distribution of age, rank, and fields of study for the University as a whole.[2] Results cannot be disaggregated to the college or department level without serious distortion.

Two questions in a lengthy survey protocol yielded the basic information about faculty associations.

Figure I

Apart from or in addition to your primary faculty appointment, do you have other associations *within the university*? Please identify below the *kind* of association, the *title*, and the *number of years* held.

a) I have no additional association ____ .

b) I have additional associations in the form of:

1) Joint faculty appointment: (title) _____ (Yrs.) _____

2) Administrative appointment in College or University: (title) _____ (Yrs.) _____

3) Research administration appointment: (title) _____ (Yrs.) _____

4) Research appointment: (title) _____ (Yrs.) _____

5) other: (title) _____ (Yrs.) _____

Apart from or in addition to your faculty appointment and other responsibilities noted within the University have you had significant professional associations *outside* within the past three years? Please identify below the *kind* of association and the *title*.

a) I have had no additional associations _____

b) I have had associations in the form of:

1) Editor or associate editor of a scholarly journal. (Identify) _____

2) President or vice-president of a scholarly society. (Identify) _____

3) Member of the executive council of a scholarly society (Identify) _____

4) Reader, juror, or panelist for professional review or selection committee (Identify) _____

5) Other _____

Overall the response rate was 76 percent and 169 usable answers were reported here.

By virtue of the land grant tradition and as a consequence of a favorable research policy there is considerable opportunity for inter-

[2] Renee Friedman contributed substantially to the development of the sample.

disciplinary association within the institution and the responses reflect a good range of opinion on the subject. Wherever appropriate, a scale of values was developed to acknowledge the gradations in responsibility implicit in the titles. For example, under the response choice "Administrative Appointment in College or University" scalar values were "1" for intradepartmental assignments such as "graduate studies chairmen," "2" for deputy or acting chairmen and assistant deans, "3" for department chairmen and associate deans, "4" for campus directors, and "5" for deans and vice-presidents. Ten variables corresponding to the items under question 3.b and 4.b were developed. (Figure 1)

Several kinds of information related to the dependent variable, academic rank, were gathered from responses and from published sources; age, dates of current appointment and first appointment, year of highest degree and awarding institution, and date of initial affiliation with the University. Present academic rank, the dependent variable, was reported by respondents in seven categories from a low-valued "other" category to a high-valued "appointment to a named professional chair." These were collapsed to five categories for this analysis.

The analytical technique applied here is a familiar one. Using two stepwise upward multiple regression procedures the dependent variable, academic rank, was correlated separately with two panels of associations (SPSS 1975).

The first panel describes five internal affiliations one might hold in addition to a regular faculty appointment. The second panel describes five kinds of external professional associations. Each panel of factors is tested for its "predictive" power in "explaining" the difference in rank and the multiple correlation value reflecting this, "$\bar{R}$," is reported for each table. The relative "importance" of each factor is indicated by the "BETA" weight and both that normalized regression coefficient

and the regular coefficient, "B," are displayed. The reported values of "R^2" can be taken as the proportion of variance in rank "accounted for by" or "attributable to" each of the predictor variables. The inter-correlation matrix exhibits the pattern of association among the "independent" variables (Darlington 1968).

It must be recognized that academic rank is a summary of many influences. Only a few can be incorporated here but several variations were tried. Age is a central factor because the predominant share of academics reach the highest rank sometime in their professional life. It is the rate at which advancement takes place, some function of the inverse relationship of time and rank level, that is important. In an effort to capture the condition more precisely regressions were run using an "advancement index," age divided by rank. Also tried was a value of "time in current rank." Neither approach added clarity or power to the analysis and they are not reported in the tables. To deal with the intervening influence of age and also to learn more of the effects of the independent variables at successive career stages three categories were established, "under forty," "forty to fifty four," and "fifty five and over." Data one reported under these headings.

It might also be anticipated that the length of time the internal associations were held would have an influence. In fact this component was separately examined. It yielded no significant information and is not reported.

FINDINGS

The distribution of individuals with various attachments beyond a conventional faculty appointment in a department is displayed in Table I.

Two thirds reported external associations while only 32 percent identified internal attachments.

Table 1

Number of Extra-Faculty Associations

	Yes	No	
Within the University	54	115	N = 169
Outside the University	112	57	

The numbers of associations of various types held inside or outside the University are displayed in Tables 2 and 3.

Table 2

Number of Associations Within the University

Joint Faculty Appointment	11
Academic Administrative Appointment	23
Research Administration	8
Research Appointment	13
Other	14
Total Associations	69

Table 3

Number of Associations Outside the University

Scholarly Journal; Editorial Staff	33
Officer of Scholarly Society	20
Executive Council of Society	31
Reader, Juror, Panelist	55
Other	55
Total Associations	194

The "other" category for "inside" associations include such activities as continuing education tasks and various temporary committee responsibilities. Among "outside" associations the label covered such items as visiting professorships, consultancies, membership on advisory councils or boards, and participation in short-term institutes. In general both categories contain those kinds of affiliation which fall outside of the main organizational structure or beyond the established network of the field of study.

It is useful to scan the overall pattern of intercorrelation values generated by the combinations tabulated for the study. For each of the three career levels, under 40, 40 to 54, 55 and over, two stepwise multiple regressions were run. One examined "inside" associations, the other, "outside." In the interests of brevity, only the higher correlations from each of the six matrices are displayed in Table 4.

What becomes visible is the shape of career lines that are manifest in choices and options at various levels. The central thread is the line of academic promotion so the negative values indicate a closing out of the academic option by the selection of other career lines. In the formative career years, under forty, there is evidence of the common package offered to scholars in the relatively high correlation of a research appointment and a joint faculty post, (r=.431). But then we note the negative relationship between joint faculty appointment and rank (r=-.332). While the sample numbers are small one might infer tentatively that in the early years it is judicious to avoid attachments except those close to the disciplinary department.

Table 4

SELECTED INTERCORRELATIONS, BY AGE, FOR INSIDE AND OUTSIDE ASSOCIATIONS

	INSIDE	Correlation Coefficient	OUTSIDE	Correlation Coefficient
A.	UNDER 40			
	Rank/Joint Faculty Appt.	-.332	Editorial Appt./Other Outside	-.341
	Rank/Academic Admin.	-.291	Juror, Rdr, Panelist/Other Outside	-.223
	Joint Faculty Appt./Res. Appt.	.431		
	Academic Admin./Other Inside	-.329		
	Research Appt./Other Inside	-.438		
B.	40 TO 54 YEARS			
	Joint Faculty Appt./Academic Admin.	-.336	Rank/Exec. Comm.	.282
	Joint Faculty Appt./Other Inside	-.239	Rank/Juror, Rdr, Panel	.470
	Academic Admin./Res. Admin.	-.301	Officer/Exec. Comm.	.315
			Exec. Comm./Juror, Rdr, Panel	.334
C.	55 AND OVER			
	Rank/Other Inside	-.376	Rank/Editorial Appt.	.224
	Joint Faculty Appt./Acad. Admin.	-.525	Rank/Other Outside	-.411
	Joint Faculty Appt./Inside Other	-.254	Editorial Appt./Other Outside	-.544
	Acad. Admin./Res. Admin.	-.354	Officer/Juror, Rdr. Panel	.527
	Acad. Admin./Res. Appt.	-.493	Officer/Other Outside	-.440
	Acad. Admin./Other Inside	-.592	Exec. Comm./Other Outside	-.388
	Res. Admin./Other Inside	.513	Juror/Other Outside	-.397
	Res. Appt./Other Inside	.524		

In many ways the mid-career pattern of correlations is most interesting. The negative values of internal associations show that alternative choices between academic administration and research administration ($r=-.301$) and between joint faculty appointment and academic administration ($r=-.336$) have assumed a mutually excluding quality. By way of contrast almost any kind of combination among outside activities is beneficial, rank benefiting most from work on national panels ($r=.470$).

The late career group displays confirming evidence of three separate lines of career development. Academic administration stands apart from joint faculty appointments ($r=-.525$). Academic administration is negatively related to both research appointment ($r=-.493$) and research administration ($r=-.354$). The few strong relationships of the early career group give way to more numerous but largely negative correlations as specialization and commitment to academic administration, research activity, or a faculty career take hold.

The two multiple regressions for the same six combinations of career stages and types of association are displayed in Tables 5 and 6. In the early career stage the inside factors have predictive power, $R=.613$. All factors carry negative BETA weights showing that every diversion from the disciplinary line slows promotion. The explanatory value of all inside factors is relatively low, $R^2=.376$, but that is to be expected in a phenomenon as complex as promotion in the early years. The outside associations promise no large benefits but there is a clue to small positive gains from editorial work, BETA .118.

Table 5

Academic Rank and Extra-Faculty Associations Inside
The Multiple Regression Data by Age Groups

A. UNDER 40

	R^2	B	BETA
Joint Faculty Appt.	.110	-.586	-.291
Acad. Admin.	.183	-.276	-.517
Other Inside	.324	-.252	-.556
Res. Appt.	.376	-.264	-.304
$\bar{R}$=.613		(n=31)	

B. AGE 40 TO 54

Res. Appt.	.032	.072	.135
Other Inside	.047	.142	.331
Acad. Admin.	.063	.126	.375
Joint Faculty Appt.	.100	.418	.325
Res. Admin.	.164	.136	.295
$\bar{R}$=.405		(n=61)	

C. AGE 55 AND OVER

Other Inside	.142	-.192	-1.53
Res. Appt.	.286	.530	1.14
Res. Admin.	.694	.250	1.00
Joint Fac. Appt.	.783	-.222	- .300
Acad. Admin.	.783	.008	.062
$\bar{R}$=.880		(n=19)	

NOTE: For reported factors, $f \geq 1.0$

Table 6

Academic Rank and Extra-Faculty Associations Outside
The Multiple Regression Data by Age Groups

A. UNDER 40

	R^2	B	BETA
Editorial Appt.	.019	.075	.118
Juror, Rdr. Panel	.042	-.128	-.179
Other Outside	.057	-.192	-.129
Exec. Comm.	.060	.050	.052
$\bar{R}$=.245		(n=31)	

B. AGE 40 TO 54

Juror, Rdr. Panel	.220	.167	.429
Exec. Comm.	.238	.056	.104
Officer	.243	.030	.082
Editorial Appt.	.246	.026	.054
Other Outside	.247	-.040	-.033
$\bar{R}$=.490		(n=61)	

C. AGE 55 AND OVER

Other Outside	.169	-.327	-.448
Juror, Rdr., Panel	.172	-.023	-.091
Exec. Comm.	.173	-.020	-.039
Officer	.173	.008	.032
$\bar{R}$=.416		(n=19)	

These data report three different age groups and separate inside and outside associations. What interactive relationships can be examined? Using the information at hand it is possible to combine inside and outside factors into a multiple regression run for each age group as shown in Table 7. However, significance defined as f≥ 1.0 is rarely attained by this combined analysis suggesting that interrelationships are too complex to be revealed in such a small sample.

One fundamental interrelationship cannot be stipulated from the responses. To examine the career track one would have to have a longitudinal sample and this cross-sectional data with small numbers renders dangerous any general inference about overall career patterns. The under 40 group is facing a very different academic environment than those over 55 have encountered. Even with this limitation speculations can point to other lines of research. One indication is unmistakeable. It is a disadvantage to become entangled with a joint faculty appointment or any other extra-disciplinary association in the formative years of an academic career.

On the other hand, the middle years are career branching years. It is possible to sustain advancement in rank in the face of a variety of choices. The predictive power of inside ($\bar{R}$=.405) or outside factors ($\bar{R}$=.490) is not large and not strong. All the BETA weights except one are positive but three outside factors are not significant. The importance of academic administration, BETA .375, signals this to be the time of decision for a significant share of the respondents. On the external scene it is a time to move toward national visibility by service on panels, juries and similar professional activities (R^2=.220, BETA .429).

Table 7

Academic Rank and All Extra-Faculty Associations:
MULTIPLE Regression Data by Age Group

	R^2	B	BETA
UNDER 40			
Joint Faculty Appt.	.002	-.600	-.165
Res. Appt.	.049	.367	.267*
Other Inside	.055	.093	.119
Academic Admin.	.056	.059	.064
Editorial Appt.	.086	.164	.221*
Exec. Comm.	.097	.139	.122
Juror, Rdr, Panel	.109	-.100	-.127
Other Outside	.124	.195	.134
$\bar{R}$=.355		n=52	
40-54			
Joint Faculty Appt.	.007	.033	.015
Res. Appt.	.013	.097	.101
Other Inside	.014	.020	.028
Res. Admin.	.017	-.040	-.050
Academic Admin.	.025	.003	.006
Editorial Appt.	.025	-.012	-.022
Officer of Prof Soc.	.030	.022	.052
Exec. Council	.071	.032	.051
Juror, Rdr, Panel	.152	.151	.353
Other Outside	.163	-.144	-.110
$\bar{R}$=.404		n=84	
55 AND OVER			
Joint Faculty Appt	.014	-.056	-.028
Research Appt.	.020	.459	.365*
Other Inside	.029	-.171	-.524*
Research Admin.	.084	.220	.316
Academic Admin.	.139	.074	.264*
Editorial Appt.	.175	.160	.220
Officer	.180	.027	.061
Exec. Council	.197	.119	.140
Juror, Rdr, Panel	.198	.004	.011
Other Outside	.198	-.002	-.002
$\bar{R}$=.445		n=32	

NOTE: Only factors indicated* achieved f≥ 1.0

For the late career years the type of internal associations one holds has considerable predictive power on academic rank ($\bar{R}$=.88) and proportion of explained variance is the highest in the set, R^2=.783. It is worth noting that there are still sidetracking effects from accepting unconventional associations inside the university (inside, other BETA = -1.53) and from joint faculty relationships (BETA = -.300). The professional world outside the campus does not carry much benefit at this point.

CONCLUSIONS

The initial question of the effects a selected group of inside and outside associations might have on the chances for promotion has led in several directions. The patterns taken by those associations among research faculty at one university confirm some views about the path of advancement in the academic world but they raise questions about others.

1. The effects of extra-faculty associations differ substantially from among the three career groups. The order of importance among different attachments varies in the early, middle, and late career groups. Even the direction of influence alters from negative to positive. The predictive power of such associations varies from $\bar{R}$=.245 in the early years to $\bar{R}$=.880 in late career.
2. For those in the formative stages of an academic career, under forty in this study, inside attachments are stronger predictors ($\bar{R}$=.613) than outside associations ($\bar{R}$=.245). In both situations all significant weightings, BETA weights, carry a "career negative" sign. This

suggests that all extra departmental activities have a dissociative effect on discipline-related endeavors. In the words of one of the respondents, "For most people's best efforts, there is a need for focus, for definition." During the first stage only a disciplinary base can provide it.

3. In the mid-career group three patterns of choice are discernible in these data. This suggests that Light's concept of "single-channel mobility" may be true only if a narrow line of scholarly development is considered. The "single-channel mobility" idea may also be a product of the institutional environment. A comprehensive university offers a range of options for the development of an "academic" career in the form of applied research and academic administration as well as the traditional academic scholarship route. Within the land grant university under study there appear to be three distinct career lines; teacher-scholar, academic administrator, and research specialist. In the mid-career years any of these options are shown to have a favorable relationship with promotion with the strongest weight attached to national participation on panels, juries, or reading committees (BETA .429).
4. Even affiliations outside the university appear timebound. For the group in the final career stage, outside associations have relatively little importance and it is largely negative. Holding office in a professional society is the exception in terms of direction but the values in these data are negligible.

In terms of further study of this sample, a first step would be to introduce several factors not presently included, notably a productivity indicator to reflect publications, patents, processes, and service activities. In

mounting a new study one would certainly make an effort to capture longitudinal data either by retrospection of those in the late stages of an academic career or by following a cohort through the formative years. These data also suggest an expansion of the sample to permit a delineation of distinctions among fields of study and departments along lines developed by Biglan, Fiedler, and others. The most challenging invitation emerging from this study is the idea that three or more distinct career options are open to the academic and, further, that the extent of the choices is closely related to the type of university.

The study has shown that, for academics, the ringing recommendation from HMS Pinafore, "stay close by your desks and never go to sea" may have some merit in the early years but it can be replaced by more useful sailing directions upon which to chart the course of a whole career.

BIBLIOGRAPHY

Biglan, A. "The Characteristics of Subject Matter in Different Academic Areas" Journal of Applied Psychology, 1973,57, pp. 195-203.

Darlington, Richard B. "Multiple Regression in Psychological Research and Practice" Psychological Bulletin, 1968, 69:3, pp. 161-182.

Gustafson, T. "The Controversy Over Peer Review" Science, 12 December 1975, 190: pp. 1060-1066.

Light, D. "Introduction: The Structure of the Academic Professions" Sociology of Education, Winter 1974.

Nie, N.H., Hull, C.H., Jenkins, J.G., Steinbronner, K., Bent, D.H. Statistical Package for the Social Sciences, 2nd Edition (N.Y. 1975), McGraw Hill, pp. 320-367.

Noble, J.H., Jr. "Peer Review, Quality Control of Applied Social Research" Science, 28 February, 1974, 185: pp. 916-918.

Sams, Henry W. "The Academic Administration of Research: A Descriptive Analysis" March 20, 1975, Report to NSF, unpublished.

Sternberg, S. "The Management of University Interdisciplinary Research" University of Southern California Research Management Improvement Workshop, Los Angeles, July 9, 10, 1974.

Straus, R. "Departments and Disciplines: Stasis and Change" Science, 30 November 1973, 182: pp. 895-898.