

Academic Stratification In Graduate Management Programs: Departmental Prestige and Faculty Hiring Patterns

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The nature of the academic stratification system within the field of management is investigated on the basis of data drawn from the 24 leading graduate departments of management. In theory, recruitment within the management marketplace follows a purely universalistic-achievement pattern that reflects a commitment to the ideal of advancement by merit. Evidence is presented, however, which suggests that a scholar's academic placement within the field of management may be influenced instead by particularistic criteria.

A fundamental canon of academic life is that truth is to be sought in an independent and impartial manner through the use of preestablished impersonal criteria. This belief finds immediate expression through the norm of universalism in science, which requires that scholarly achievement be the sole criterion used to evaluate performance and that the acceptance or rejection of competing claims be based solely on reason and experience. Particularistic criteria of validity such as the personal or social attributes—age, race, sex, religion, nationality, class, and personal qualities—of opposing claimants are condemned as irrelevant. As Merton (1973, p. 270) has pointed out, “Objectivity precludes particularism.”

The norm of universalism also finds expression in the processes of university faculty employment. In theory, academic hiring practices should follow a purely universalistic-achievement pattern that reflects a commitment to the ideal of employment and advancement by merit, where “scholarly performance is the only legitimate claim to recognition” (Caplow & McGee, 1958, p. 224). In such a system, scientific “careers are open to talent” and “recognition and esteem accrue to those who have best fulfilled

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their roles, to those who have made genuinely original contributions to the common stock of knowledge" (Merton, 1973, p. 272; p. 293).

Given the available data, however, it could be easily argued that despite the academic system's normative commitment to universalistic criteria, they are not necessarily used in all instances (Crane, 1970). Indeed, Long (1978), in the most recent and certainly the most comprehensive study in the area, for a sample of 239 Ph.D. biochemists, has reported finding a nonsignificant relationship between productivity, as indicated by measures of publications and citations, and prestige of academic affiliation. This finding supports earlier speculation that particularistic criteria (e.g., a candidate's doctoral origin) are often used in the recruitment and selection of faculty.

Those investigating this possibility have consistently reported that the prestige of an individual's doctoral institution does indeed have a greater influence than scholarly performance has on selection for a position in a distinguished academic department (e.g., Cole & Cole, 1973; Crane, 1965; Gross, 1970; Hargens & Hagstrom, 1967; Long, 1978; Nikolai & Bazley, 1977). This has been found to hold true in both the natural and biological sciences as well as in the humanities and supports the earlier views of Berelson (1960) and Caplow and McGee (1958) who stressed the impact of prestige of doctorate on a scholar's subsequent affiliation in academic life. Recognizing the inequities associated with an academic stratification system based principally on prestige of doctoral origin, Caplow and McGee (1958) have sympathetically concluded:

Unfortunately, as we have seen, the initial choice of a graduate school sets an indelible mark on the student's career. In many disciplines, men trained at minor universities have virtually no chance of achieving eminence. Even in those disciplines in which the distribution of professional rewards is not tightly controlled by an inner circle of departments, the handicap of initial identification with a department of low prestige is hardly ever completely overcome. Every discipline can show examples of brilliant men with the wrong credentials whose work somehow fails to obtain normal recognition (p. 225).

Perhaps even more invidious than the notion that positional success may be largely determined by the prestige of a candidate's doctoral institution is the suggestion that academic jobs are often secured through social ties or influence (Long, Allison, & McGinnis, 1979). Caplow and McGee (1958) have presented several qualitative academic examples of what they refer to as "closed" or preferential hiring. Typical of such situations are instances in which a job candidate receives preferential treatment by virtue of being recommended by a friend of a member of a hiring department or perhaps a former graduate of a department. Certainly the most visible form of social tie or linkage is academic inbreeding; that is, "retaining" new graduates or "calling back" former graduates after they have taught

elsewhere. Crane (1970) and Gross (1970), and most recently Nikolai and Bazley (1977), have presented data suggesting that inbreeding is an important factor in determining the positional success of many scholars. To the extent that such linkages are stratified, preferential treatment should produce correlations between the prestige of candidates' doctoral origins and the prestige of their employing departments (Long et al., 1979).

Although the studies were conducted in disciplines other than management, generalization of these findings suggests the possibility that faculty hiring in prestigious management departments may also be determined by the prestige of candidates' degrees. Given this possibility, the purpose of the present examination is to determine whether evidence reflects the operation of particularistic hiring patterns within the field of management. The present effort will therefore not only extend the basic findings in this area, but provide important information about what the field of management is and who comprises it. It should be realized that ours is a preliminary exploratory study and as such is not meant to provide a final statement on the issues involved.

The analysis is presented in three parts and centers around an examination of the instructional staff of the 24 leading graduate departments of management in the United States. First, we will assess the relationship between the prestige of faculty members' doctoral degree origins and the prestige of their employing departments for evidence of particularistic hiring patterns. Then, we will determine the extent of academic inbreeding within the departments sampled. Finally, if we find such relationships, we will ascertain the nature and extent of the cross-hiring patterns that exist among the departments under investigation.

The emphasis of our research is on graduate training in management. The decision to concentrate on graduate departments was based on at least three considerations: (a) graduate departments are highly visible within the profession, (b) graduate education is of utmost importance for the continued development of management as a field, and (c) prestige ratings of graduate management departments are available. Further, primary focus is directed at the top 24 departments in the belief that prestige is a more relevant aspect of the hiring process at this echelon than at any other level of academe (Gross, 1970).

Method

Nature of the Research Setting

The principal thrust of the study was to examine the operation of the academic stratification system among prestigious schools within the field of management. Given the basic nature of the research, sources were needed for two principal elements: (a) the identification of prestigious graduate management departments and (b) information relative to interuniversity hiring patterns for those departments. The two elements were obtained from primary as well as secondary sources. Where possible, unobtrusive measures (for example, records of employment) were used rather than

questionnaires in order to avoid some of the problems (e. g., non-response bias) associated with obtrusive sources (Webb, Campbell, Schwartz, & Sechrest, 1966).

Identification of Prestigious Graduate Management Departments

For the purposes of this research, prestigious departments of management were identified on the basis of a survey conducted by Brooker and Shinoda (1976). Using rankings supplied by department chairpersons of universities holding membership in the American Assembly of Collegiate Schools of Business, Brooker and Shinoda (1976) developed ratings of doctoral programs of business in the functional areas of accounting, finance, marketing, management science/operations research, and organization theory/behavior. Survey participants were asked to identify and rate the five institutions that, in their judgment, had the "best" programs in each area. Replies were tabulated on both an assigned total point basis (five points for a first place, four for second, etc.) and a frequency-of-mention basis. An analysis of the present academic affiliation and the degree origin of each respondent revealed no appreciable bias in the ratings (Brooker & Shinoda, 1976). Similarly, Carter (1966) and Margulies and Blau (1973) concluded that such biases tend to cancel out when responses are aggregated.

Since we were interested in characterizing the *overall* prestige of management departments rather than of specific programs within one department, it was necessary to combine the management science/operations research and the organization theory/behavior rankings. Therefore, a perceived prestige ranking of doctoral management departments was obtained by collapsing into a single list Brooker and Shinoda's ratings of the leading graduate degree programs in the areas of organization theory/behavior and management science/operations research. Although some question may be raised about the combining of these two "dissimilar" fields of management, it should be noted that there is a high correspondence between the two lists of the departments cited. More specifically, of the 20 organization theory/behavior programs ranked by Brooker and Shinoda, 13 are on the management science/operations research list. Conversely, of the 17 management science/operations research programs rated, all but 4 are on the organization theory/behavior lists.

The combined list yielded a ranking of the 24 top graduate (doctoral) departments in what generally would be referred to under the broad rubric of management. The identities of the departments included in the study and their assigned prestige rankings are presented in Table 1. As is evident from the table, several relatively clear demarcations are indicated in the assigned prestige points, and following Crane (1970) these breaks were used to group the departments into four levels of departmental prestige to be used later in the study.

Table 1
Prestige Ranking of 24 Leading Graduate Management Departments

<i>School</i>	<i>Rank</i>	<i>Prestige points^a</i>
1. Stanford	1	63
2. MIT	2	49
3. Harvard	3	37
4. Carnegie-Mellon	4	34
5. UCLA	5	32

6. Chicago	6	24
7. California (Berkeley)	7	20
8. Indiana	8	19
9. Michigan	9.5	18
10. Yale		

11. Case-Western Reserve	11	17
12. Cornell	12.5	14
13. Washington (Seattle)		
14. Northwestern	14.5	10
15. Wisconsin		

16. Pennsylvania (Wharton)	16	7
17. Michigan State	17.5	6
18. Pennsylvania State		
19. Columbia	19	5
20. Minnesota		
21. Purdue	20	5
22. Illinois		
23. Ohio State	22	4
24. Texas (Austin)		

Source. Based on Brooker & Shinoda (1976, pp. 240-251).

^aThis total was obtained by adding the number of times a school was mentioned as having a leading program in management science/operations research to the number of times it was mentioned as having a leading program in organization theory/behavior.

Identification of Faculty in Prestigious Graduate Management Departments

Since the prestige information on graduate management departments was collected during 1974 (Brooker, 1980), the 1975 academic year was chosen as a baseline for the present study. In addition, at the time the present research was being conducted, 1975 was the most current year on which published data were available on the personnel in the 24 management departments. (It should be noted that the departmental prestige information was not published until April, 1976, and thus would not be expected to have influenced the hiring patterns of the departments under investigation.)

In characterizing the nature of the faculties employed in the 24 management programs, it was necessary to collect personal data relative to their academic careers. The source of information for these data was the personal sketches reported in *Faculty Personnel: A Directory of the Instructional Staff of Member Schools of the American Assembly of Collegiate Schools of Business, 1975* (1976). Produced at five-year intervals, the *Directory* is essentially a compilation of background information on university faculty employed in university schools of business accredited by the American Assembly of Collegiate Schools of Business (AACSB). (The directory referenced here was the most recent edition and is the same data

source, except for edition, used in Baty, Evan, and Rothermel's (1971) study of faculty interchanges among AACSB accredited graduate schools of business.)

Rather than associating faculty with specific departmental units (for example, accounting, finance, marketing, management), the AACSB *Directory* classifies faculty personnel according to broadly-defined primary teaching areas. Consequently, the organization of the *Directory* makes it difficult to identify members of a specific department. To overcome the problem of identifying management faculty in the selected management departments, it was necessary to devise a screening procedure for determining the composition of the research sample. Most specifically, subjects selected for the study had to meet three criteria; they had to:

1. have an assistant, associate, or full-professor rank in the department (visiting personnel to be excluded);
2. teach *and* hold a degree in one of the 24 primary areas listed in Table 2; and
3. hold membership in at least one of the 12 professional associations listed in Table 2.

It was not possible to obtain information from the AACSB *Directory* for three programs (Yale's Department of Administrative Science, Cornell's New York School of Industrial and Labor Relations, and Illinois' Institute for Labor Relations). Therefore, university and departmental directories as well as telephone interviews were used to provide the needed information. For Cornell University and the University of Illinois, faculty members associated with the schools' established AACSB member programs as well as those affiliated with the above named programs in labor relations were included in the research sample in order to be consistent with the decision rules identified earlier. Although there may be arguable differences in the perceived prestige of the separate programs at these institutions, the programs were combined to reflect a composite picture of management education at these schools.

Using the data sources and the decision rules described above, a total of 684 subjects employed in the 24 management departments were selected to compose the study's sample. For each of these subjects, the following data were coded by two paid raters working independently of the investigators: (a) sex, (b) university origin of doctoral degree, (c) year of graduation, (d) primary teaching area, (e) secondary teaching area, (f) professional affiliations, and (g) rank. The categories for classifying the teaching areas and professional affiliations were those developed by the AACSB.

Results

Description of the Sample

Not too surprisingly, 97% of the sample (out of 684) were male, and all but roughly 8% held terminal degrees. Approximately 46% were full professors, the remainder was divided almost equally between associate (23.2%) and assistant (27.0%) professors. Less than 1% of the sample held terminal degrees from a foreign university.

Table 2
Teaching Area and Professional Association Criteria
for Selecting the Research Sample^a

Primary teaching and degree areas	Association memberships
1. Behavioral science	1. Academy of International Business
2. Business policy & strategy	2. Academy of Management
3. General management	3. Administrative Management Society
4. Human relations	4. American Academy of Arbitration
5. Industrial administration	5. American Institute for Decision Sciences
6. Industrial management	6. American Management Association
7. Industrial relations	7. American Society for Training and Development
8. Information systems	8. American Sociological Association
9. International business	9. Business Communication Association
10. Labor relations	10. Institute of Management Science
11. Management	11. Industrial Relations Research Association
12. Manpower	12. Operations Research Society of America
13. Operations management	
14. Organizational behavior	
15. Organizational psychology	
16. Organizational science	
17. Personnel	
18. Production	
19. Psychology	
20. Quantitative methods	
21. Small business management	
22. Social psychology	
23. Sociology	
24. Statistics	

^aThese categories are based on classifications originally developed by the American Assembly of Collegiate Schools of Business and presented in *Faculty Personnel: A Directory of the Institutional Staffs of Member Schools of the American Assembly of Collegiate Schools of Business, 1975* (1976).

Cross-hiring Among Prestigious Departments of Management

Table 3 presents the principal data on which the study is based. It contains a cross-tabulation of the teaching faculties of the leading 24 graduate management departments according to the origin of each member's highest degree and their current teaching position as of 1975.

As Table 3 indicates, cross-hiring among the 24 departments was extensive. Of the 627 faculty members with terminal degrees, 88% received their degrees from among the group of 24 departments; 186 faculty, or roughly 30%, obtained their degrees from departments rated among the leading five—Stanford, MIT, Harvard, Carnegie-Mellon, and UCLA. Moreover, 60% of the doctoral faculty of these five departments received degrees from their own or other departments within the top five.¹

¹It is possible that hiring from other departments at the universities being studied could have taken place. We feel though that this percentage is small. Our data, however, do not permit us to give an exact description of the extent of such intrauniversity cross-hiring. In order to clarify the picture of cross-hiring somewhat, we telephoned informants at a 25% random sample of the 24 departments studied. Reported estimates of faculty having degrees from the employing university but from a program other than one in management ranged from 0% to 8.6%. The average number was slightly over 1 faculty member per management program. These data would appear to substantiate our belief that hiring from other departments at a university is low.

Table 3
Teaching Faculties of 24 Leading Management Departments According to
Origin of Members' Highest Degree and Current Teaching Position

	<i>Flow of Faculty to (Position)</i>																								
<i>Flow of Faculty from (Degree)</i>	Stanford	MIT	Harvard	Carnegie-Mellon	UCLA	Chicago	Cal. (Berkeley)	Indiana	Michigan	Yale	Case-Western	Cornell	Wash. (Seattle)	Northwestern	Wisconsin	Pennsylvania	Michigan State	Pennsylvania State	Columbia	Minnesota	Purdue	Illinois	Ohio State	Texas (Austin)	Total
1. Stanford	3	3	4	0	4	1	5	3	0	1	0	0	4	0	1	1	0	0	2	1	2	2	1	2	40
2. MIT	4	5	2	1	3	3	3	0	1	0	2	1	0	0	1	5	1	0	2	1	0	0	0	1	36
3. Harvard	0	4	32	0	0	4	1	0	2	1	1	2	4	5	1	1	2	1	2	1	4	2	1	3	74
4. Carnegie-Mellon	1	1	0	0	0	2	0	1	0	0	0	0	0	1	0	2	0	0	0	0	0	1	1	2	12
5. UCLA	2	0	1	0	7	1	0	1	0	0	2	0	1	0	1	0	0	3	1	0	1	0	1	2	24
6. Chicago	2	1	0	0	1	3	0	1	1	0	1	2	1	1	1	1	1	0	3	0	2	1	0	0	23
7. Cal. (Berkeley)	2	3	1	1	0	2	2	1	1	2	1	1	2	1	1	2	1	1	1	1	0	4	0	0	30
8. Indiana	0	0	0	0	0	0	0	10	0	1	0	1	1	1	3	0	1	3	0	2	0	1	3	2	29
9. Michigan	0	2	1	0	0	4	0	1	8	1	2	3	1	0	0	0	0	1	2	2	1	2	2	1	34
10. Yale	1	0	0	0	2	1	0	0	0	4	3	2	0	2	0	1	0	0	1	0	0	3	0	0	20
11. Case-Western	1	0	1	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	2	0	0	1	8
12. Cornell	0	1	3	1	0	3	0	1	1	2	0	7	1	0	1	2	0	0	0	0	0	5	0	0	29
13. Wash. (Seattle)	0	0	1	0	1	0	0	2	1	0	0	1	4	0	0	0	1	1	0	2	0	0	0	0	13
14. Northwestern	0	0	0	0	1	1	0	2	0	3	0	0	1	4	1	1	1	1	0	0	0	0	1	0	17
15. Wisconsin	0	0	0	0	1	0	0	1	1	0	0	9	2	0	3	0	1	0	0	0	1	2	4	1	26
16. Pennsylvania	0	1	2	0	0	0	0	1	1	0	0	0	0	0	0	7	0	0	0	1	0	0	2	0	15

Table 3 (continued)
Flow of Faculty to (Position)

Flow of Faculty from (Degree)	Stanford	MIT	Harvard	Carnegie-Mellon	UCLA	Chicago	Cal. (Berkeley)	Indiana	Michigan	Yale	Case-Western	Cornell	Wash. (Seattle)	Northwestern	Wisconsin	Pennsylvania	Michigan State	Pennsylvania State	Columbia	Minnesota	Purdue	Illinois	Ohio State	Texas (Austin)	Total
17. Michigan State	0	0	0	1	1	0	0	1	1	0	0	1	1	0	1	0	2	1	0	1	0	1	3	0	15
18. Penn. State	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	4
19. Columbia	1	0	1	0	0	1	2	0	0	0	0	2	2	0	0	1	0	0	8	0	0	0	0	0	18
20. Minnesota	0	0	0	0	0	0	2	0	0	0	0	0	1	1	1	0	0	0	0	8	0	0	0	0	13
21. Purdue	0	0	1	0	1	0	0	3	1	0	0	2	0	2	2	0	0	0	0	1	5	1	0	0	19
22. Illinois	0	0	0	0	2	0	0	1	0	2	2	0	4	2	0	0	0	0	0	1	0	0	1	1	16
23. Ohio State	0	0	1	0	0	0	1	6	1	0	0	1	0	0	1	0	1	0	0	0	2	1	3	1	20
24. Texas (Austin)	0	0	0	0	1	0	0	0	0	0	0	1	2	0	0	0	1	1	0	0	0	1	7	14	
Total	17	21	51	4	25	27	16	36	20	17	17	36	32	21	18	24	12	16	22	22	20	26	24	25	549
Foreign	0	0	1	0	0	1	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	1	6
Total	17	21	52	4	25	28	16	36	20	17	19	36	32	21	18	24	12	17	22	22	20	26	24	26	555
Non-top 24	2	0	4	1	3	1	3	13	0	4	5	5	4	0	2	2	4	5	2	4	0	3	3	2	72
Total	19	21	56	5	28	29	19	49	20	21	24	41	36	21	20	26	16	22	24	26	20	29	27	28	627
Non-terminal	3	1	7	1	1	0	1	4	0	3	3	2	2	5	0	4	2	3	0	2	1	8	2	2	57
Total	22	22	63	6	29	29	20	53	20	24	27	43	38	26	20	30	18	25	24	28	21	37	29	30	684

Relationships Between Prestige of Degree and Prestige of Employing Department

Table 4 shows an analysis of the principal data of the study by prestige level. As previously mentioned, the levels employed were established using the prestige classification of Brooker and Shinoda (1976) (see Table 1). As shown, more than twice as many graduates of the leading 10 departments were hired by those departments as were graduates of the remaining 14 departments (169 versus 65). Without adequate matriculation data, it is impossible to say whether this result is the consequence of a larger number of degrees awarded by the leading 10 schools or due to some other underlying cause. In this vein, it is interesting to note that with the exception of the second five programs (ranking 6 through 10), each level favored graduates of its own grouping and that only 78 (roughly 12%) of the doctoral faculty hired by the leading 24 programs held degrees from programs outside of the top 24. Finally, as would be expected, a chi-square analysis of the data contained in Table 4 confirmed a significant relationship, $\chi^2(12) = 100.0$, $p < .0001$, between the prestige of faculty members' doctoral programs and their position in the academic stratification system (that is, the prestige of their employing departments).

Table 4
Prestige Rank of Doctoral Origin by Prestige Rank of Hiring Department
Among Faculty Hired by 24 Leading Management Departments

Prestige rank of doctoral origin ^a	Prestige rank of hiring department				Total ^b
	1-5	6-10	11-15	16-24	
1-5	77 (59.7)	30 (21.7)	27 (19.0)	52 (23.9)	186
6-10	19 (14.7)	43 (31.2)	30 (21.1)	46 (21.1)	138
11-15	11 (8.5)	18 (13.0)	38 (26.8)	26 (11.9)	93
16-24	11 (8.5)	25 (18.1)	29 (20.4)	67 (30.7)	132
All other ^c	11 (8.5)	22 (15.9)	18 (12.7)	27 (12.4)	78
Total	129	138	142	218	627

NOTE: Column percentages are given in parentheses, $\chi^2(12)=100.00$, $p<.0001$.

^aThe universities within each of the classes are listed in Table 1.

^bWhereas 684 individuals were identified in the research sample, 627 of these were terminally qualified.

^cThis class includes all other doctoral level graduate management departments which were not ranked in the Brooker and Shinoda (1976) survey.

Inbreeding Among Prestigious Departments of Management

In Table 3, it can also be seen that academic inbreeding—retaining new doctorates or calling back former doctorates after they have taught elsewhere—varied considerably by department with Harvard (57%) and Michigan (40%) the highest. Overall, 136, or 22%, of the doctoral faculty of the 24 leading departments received their degrees from the institutions at

which they were teaching (see Table 5). Notably, the proportion of inbred faculty is the highest, 47 out of 129 (36%), at the top five ranked schools. This compares to 20% for programs 6 through 10, 14% for programs 11 through 15, and 19% for programs 16 through 24. Not surprisingly, a chi-square analysis of the data presented in Table 5 revealed that academic inbreeding was positively and significantly related to perceived prestige level, $\chi^2(3) = 22.5, p < .0001$.

Table 5
Inbreeding^a and Prestige Rank of 24 Leading Management Departments

Origin of doctoral degree	Prestige rank of hiring department ^b				Total
	1-5	6-10	11-15	16-24	
From department at which currently employed	47 (36.4)	27 (19.6)	20 (14.1)	42 (19.3)	136
From department other than where currently employed	82 (63.6)	111 (80.4)	122 (85.9)	176 (80.7)	491
Total	129	138	142	218	627

Note: Column percentages are given in parentheses, $\chi^2(3) = 22.47, p < .0001$.

^aInbreeding is defined as the retaining of new graduates or calling back of former graduates after they have taught elsewhere.

^bThe universities within each of the classes are listed in Table 1.

It is also interesting to note (see Table 6) that excluding the doctoral faculty who received their degree from the institutions at which they were affiliated, the relationship between rank of hiring department and rank of graduate degree decreased to a level of nonsignificance, $\chi^2(12) = 15.81, p > .05$. This result thus suggests that when inbreeding is controlled, those graduates of the leading 24 departments who were hired by other departments within this group were equally likely to be hired at any of the four prestige levels identified among these schools. It should be emphasized here that this finding applies only to the cluster of the 24 most prestigious schools; our data did not permit us to examine the prestige-of-hiring-department/prestige-of-degree relationship for schools outside of this cluster, nor did our data allow us to control for cross-departmental as opposed to intradepartmental hiring (see footnote 1).

Whereas previous analyses indicated a relationship between the prestige of doctoral origin and the prestige of academic affiliation, such an association suggests that clusters of management departments may exist which represent departmental coalitions that provide and hire faculty members to and from one another. In order to explore the nature of such clusters, nonmetric multidimensional scaling analyses were conducted (Green & Carmone, 1970; Shepard, Romney, & Nerlove, 1972). Essentially, the purpose of multidimensional scaling is to map a set of stimuli into clusters of points in multidimensional space in such a way that stimuli which are similar, in an empirical sense, are close together in the space and stimuli which are dissimilar are distant from each other in the space. The

Table 6
Prestige Rank of Doctoral Origin by Prestige Rank of Hiring Department Among
Faculty Hired by 24 Leading Management Departments—Excluding Faculty
Hired by Department of Graduate Training

Prestige rank of doctoral origin ^a	Prestige rank of hiring department				Total ^b
	1-5	6-10	11-15	16-24	
1-5	30 (36.6)	30 (27.0)	27 (22.1)	52 (29.5)	139
6-10	19 (23.2)	16 (14.4)	30 (24.6)	46 (26.1)	111
11-15	11 (13.4)	18 (16.2)	18 (14.8)	26 (14.8)	73
16-24	11 (13.4)	25 (22.5)	29 (23.8)	25 (14.2)	90
All other ^c	11 (13.4)	22 (19.8)	18 (14.8)	27 (16.4)	78
Total	82	111	122	176	491

Note: Column percentages are given in parentheses, $\chi^2(12) = 15.81, p > .05$.

^aThe universities within each of the classes are listed in Table 1.

^bWhereas 684 individuals were identified in the research sample, 491 of these were terminally qualified and not employed by the department from which they received their doctoral degrees.

^cThis class includes all other doctoral level graduate management departments which were not ranked in the Brooker and Shinoda (1976) survey.

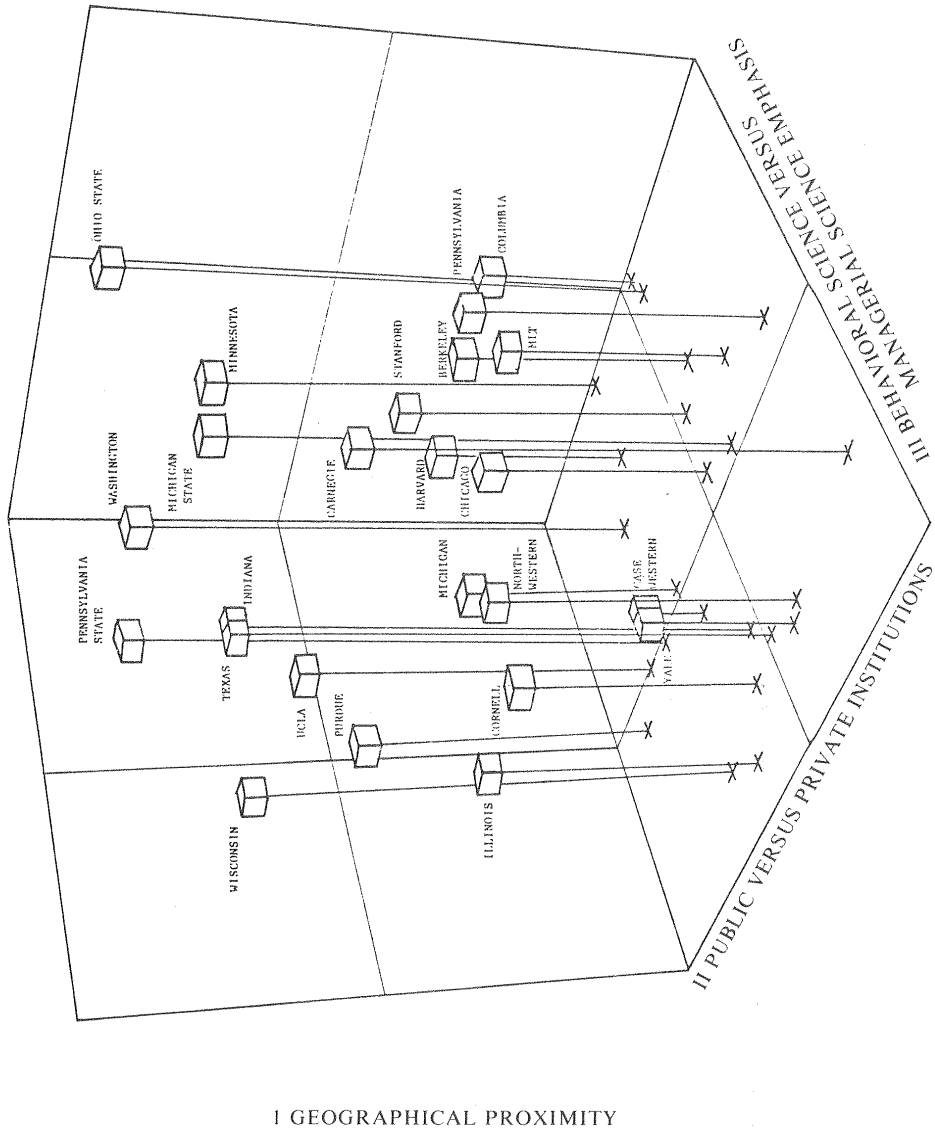
dimensions that define this space may then be labeled so as to describe the nature of the clusters of stimuli.

As an initial step, pairwise measures of similarity (that is, a measure of movement of individuals from and to management departments) among the 24 programs were developed using Nikolai and Bazley's (1977, p. 616) exchange index. This index provides a two-fold measure of the extent to which management departments (a) provide faculty members to and (b) acquire faculty members from each other. As noted by Nikolai and Bazley (1977, p. 617), the index provides a standardized measure of flow of faculty between any two departments and takes into account the size of the departments involved. High coefficients represent high rates of faculty exchange, low coefficients represent low exchange rates. The application of the exchange index resulted in a 24 x 24 departmental interexchange matrix where the cells were composed of exchange indices for all pairwise combinations among the departments. This matrix served as the input to the TORSCA 9 nonmetric multidimensional scaling program (Young, 1968).

Results from the multidimensional scaling analysis suggested three dimensions accounting for 83% of the variance among the departments. Figure 1 shows the plot of the centroids of the 24 management departments in the three-dimensional space.

Given only the information regarding the plots of the universities in the three-dimensional space, the labeling of the dimensions in Figure 1 is rather subjective. Thus, when studying the university plots and the names given to

Figure 1. Multidimensional scaling analysis of interuniversity exchanges of management faculty.



the components differentiating them, it should be kept in mind that the labels given are rough characterizations. Yet, these labels, however subjective, do provide a convenient, descriptive means for better understanding and characterizing the three variables that contribute to university faculty exchanges.

An examination of the plot of the universities on the three dimensions suggests that Dimension I appears to consist of clusters of schools within relatively close geographical proximity. For example, there appears to be a mid-western cluster consisting of schools such as Wisconsin, Purdue, and Illinois, as well as an eastern cluster consisting of schools such as Pennsylvania, Columbia, and MIT. Because of the nature and location of the schools in such clusters, this dimension could probably be labeled "Geographical Proximity." Dimension II seems to indicate a private versus public component. On one end of the continuum are private schools such as Columbia, Stanford, and Carnegie-Mellon, while on the other end are the large public institutions such as Illinois, Purdue, Texas, and Indiana. Therefore, this dimension could be called "Public versus Private Institutions." Finally, the third dimension appears to suggest a differentiation between a behavioral versus a managerial science emphasis. On one end are schools with historical emphasis on management science, such as Berkeley and MIT, and on the other end are schools, such as Wisconsin and Illinois, that have traditionally stressed the more behavioral aspects of management. Thus, a suggested name for this third dimension would be "Behavioral Science versus Managerial Science Emphasis."

Discussion and Conclusions

The foregoing findings suggest the possibility that the identification of management faculty with their doctoral institution has a substantial relationship to their placement within the academic stratification system. In this regard, however, the significant relationship uncovered between prestige of doctorate and prestige of employing department among faculty teaching in the country's leading graduate departments of management suggests at least two alternative hypotheses (cf. Long et al., 1979). On the one hand, as mentioned earlier, the data presented could be theoretically interpreted in support of the view that particularistic criteria are used in the selection of faculty. This explanation, of course, would be the case to the extent that it could be shown that, independent of demonstrated qualifications, prestige of doctoral origin is influential in selection for a position in a leading department. On the other hand, however, it is possible that the prestige of one's doctoral department is associated with some other, more fundamental variable(s) indicative of a candidate's ability as a scholar. Indeed, the most prestigious graduate departments of management may, in fact, produce the most qualified job candidates. If this is so, the relationship between prestige of doctoral origin and employment affiliation would be evidence reflecting the universalistic assignment of rewards.

Unfortunately, determining which of the above hypotheses reflects

reality is impossible given the data bases currently available. While indices of productivity and recognition (see, for example, Crane, 1965) have been developed in the hard sciences, no generally agreed-upon comparable measures are available within the field of management. With respect to productivity such a measure would have to distinguish between major and minor publications (e.g., editorships versus full-length articles) while controlling for "professional age" (the number of years since obtaining the doctorate). To develop such an index, one would have to incorporate some gauge of the quality of each individual contribution. As to recognition, an appropriate index would have to accurately reflect the number of honors conferred upon a scholar. It would thus be necessary to include such criteria as the presidency of a national professional association, membership in certain honorary societies, post-doctoral fellowships, prizes conferred for outstanding scientific work, generation of grants, service on governmental advisory boards, and membership of journal editorial boards. Moreover, since certain honors are more sought after than others, differing categories of recognition would have to be established.

While it is perhaps possible to think of other potential explanations for the observed results, the reasoning advanced in the present analysis is well founded in the academic literature on social stratification processes and is consistent with findings in many other disciplines. In this regard, it is perhaps instructive to again note Long et al.'s (1979, p. 816) observation that "past studies (in other fields) do not support the contention that academic position is allocated exclusively, or even largely, on the basis of scientific productivity." Because the norm of universalism is so strongly held in the field of management (Pfeffer, Salancik, & Leblebici, 1976), the results of this preliminary investigation are meant to be evaluated in a tentative and conservative fashion. Clearly, extensions and refinements of this study or other inquiries into the academic stratification system within the field of management might employ other dimensions of prestige, as well as alternative ratings of graduate programs in management. Such efforts, however, because of limited data, will face the same problems of analysis as those of the present undertaking.

Data limitations, by definition, leave unanswered questions. In addition to the concerns dealing with the development of indices of productivity and recognition, the available data, for instance, do not allow us to determine if the magnitude of the relationship between prestige of doctorate and current affiliation varies at different stages in a scholar's career and among different levels in the academic stratification system. Crane (1970), analyzing data from several other fields (psychology, economics, chemistry), has reported evidence that at later stages of an applicant's career the importance of doctoral origin in selection decisions tends to diminish. A further limitation of our data is that they do not permit us to differentiate between faculty who were retained immediately after graduation by the programs that awarded their degrees and those "home-grown" products called back after teaching elsewhere for some years in one or more programs. Whether these two groups differ in any significant respect remains unknown.

In closing, it should perhaps be noted that an even broader issue seems to be at the core of the present investigation. Using particularistic processes rather than universalistic criteria in the recruitment and selection of faculty would continue a misallocation of positions. This would not only damage the advancement of the field of management as a whole but, to the degree that prestigious positions and superior resources are allotted to those not best qualified to use them, would deal unfairly with individual scholars (Long et al., 1979). Indeed, research has repeatedly shown (e.g., Long, 1978) that the benefits associated with a prestigious program—more free time for research, access to abler research assistants, more stimulating colleagues, and the “halo” effect of being part of a well-known department—have a major lasting impact on a scholar’s productivity. When such benefits are combined with what Merton (1968, p. 58) has referred to as the “Matthew Effect”—“the accruing of greater increments of recognition for particular scientific contributions to scientists of considerable repute and the withholding of such recognition from scientists who have not yet made their mark”—it is easy to understand how the resulting “accumulative advantage” (Allison & Stewart, 1974) can at least partially account for significant career differences among scholars.

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