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ABSTRACT

This paper is concerned with the impact of faculty attributes on the college environment. The results of this analysis suggest 3 general conclusions of use to future research on college impact: (1) instruments to obtain student-derived assessments of college climate are useful and valid tools for determining intrinsic attributes of college environments; (2) faculty attributes, including measures of faculty quality, have only moderate or little direct effect on college climate, at least a climate having to do with students' feelings of concern for them as individuals at their institution; and (3) the pervasiveness of institutional structural attributes, particularly size, cannot be explained by either the kinds of students or the types of faculty that may be attracted to or recruited by these institutions. These conclusions suggest that there is a continuing need for more research on college impact and college climate that will focus not only on students but also on the role of faculty and of institutional structure. Such research can be directly applied to establishing sound educational policy and new educational programs. (Author/HS)

Faculty Influences on the College Environment*

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*Presented at the annual meeting of the American Educational Research Association, Chicago, April, 1972.

Faculty Influences on the College Environment

Sound administrative decision-making in higher education requires that a good deal be known about the environmental characteristics of colleges and the impact that these factors have on student's growth and development. Establishing educational policy and adopting new programs presupposes some knowledge of the impact of the institutional mileau, including the effects on students, of its practices, its structure, its personnel, and its programs. Yet such decisions for change in American higher education have seldom been made on the basis of empirical data and systematic analyses; decisions are based largely on economic constraints, political pressure, tradition, folklore, and anecdotal information. Indeed, only in recent years have objective measures of institutional environments become available for use in empirical research which might aid in evaluating educational policy and in instituting change. However, since this research has been largely descriptive or taxonomic, little attention has been paid so far to the question of how college environments evolve, develop, and take shape. This question of etiology is, of course, critical to an understanding of how to change college environments. This paper is concerned with one aspect of the question, namely, the impact of faculty attributes on the college environment.

Objective Measurement of the College Environment

In the past few years there have been a number of major efforts to develop measures of the college environment other than the easily derived administrative and structural variables such as institutional type, control, geographic location and size. Initial expansion of the list of potential college impact variables encompassed other quasi-demographic

institutional features, including institutional revenues, library size, student-faculty ratio, average degree level of faculty, average achievement test scores of students, and the students' major areas of study. The Environmental Assessment Technique (EAT) (Astin and Holland, 1961) is representative of an approach which relies on this type of information.

Indices and scales have also been developed to measure institutional "climates" more directly. The first such systematic measurement of college climate was the College Characteristics Index (CCI) of Pace and Stern (1958). Reanalysis of the CCI by Pace (1960, 1963) later evolved into the College and University Environment Scales (CUES). A third type of scale, developed by Astin (1968; 1971a) was derived from factor analyses of more than 400 items of student data and resulted in the Inventory of College Activities (ICA). Another effort (Centra, 1970), based on a multimethod analysis using primarily the ETS Questionnaire on Student College Characteristics (QSCC), has led to the development of yet a fourth environmental assessment scale.

Despite differences in item content, methodology, and scale names, there is probably a substantial degree of overlap among certain scales from these various approaches. For example, there are parallels between some of the "faculty press" items in the CCI (Thistlethwaite, 1960), the "community" dimension in the CUES, the "Concern for the Individual Student" scale in the ICA, and the "Faculty-Student Interaction" factor derived from the QSCC. Centra (1970) and Astin (1971b) address their consideration to several other analogous factors from these various environmental measures.

The CCI, CUES, ICA, and the QSCC scales all rely primarily on students as reporters on the college environment. Feldman (1969) notes that

such measures are in part probably determined by the sex of the student respondents and by the students' "location" (class, major, residence) in the system. Additionally, he cautiously suggests that "the student's own values, attitudes, and personality characteristics on occasion may also come into play in his responding to the instruments. . . ." (Feldman, 1969, p. 217). In contrast to these student-dependent instruments, the Likert-type Institutional Functioning Inventory (IFI) employs faculty as the primary reporters on the institutional environment, although this instrument is still in developmental stages (Peterson, n.d.). A number of other measures, based on administrator as well as faculty and student respondents, are summarized and categorized by Feldman (1969, 1970),as derived from his collaborative overview of college impact research (Feldman and Newcomb, 1969). However, it is primarily the student-derived instruments which have been used so far in research requiring the assessment of college climate.

Concern for the Individual Student

One of the 35 patterns of environmental stimuli from the ICA is labeled "Concern for the Individual Student." This measure, which is based upon students' subjective impressions, ratings of environmental traits, and evaluations of their experience at the college, may be described as follows:

> Students in institutions scoring high on "Concern for the Individual Student" see the faculty and the upperclassmen as going out of their way to help students. The environment tends to be rated as warm, friendly, and as high in morale. Students tend to be cooperative rather than competitive in their interpersonal relations. Instructors in

high-scoring institutions are more likely to be described as knowing their students by name than are instructors in low-scoring colleges. Students in low-scoring colleges frequently report that they feel like "numbers in a book," that they felt "lost" when they came to the institution, and that the faculty is more interested in research than in teaching. They also feel that they have not had enough personal direction in their studies and course selection and that the frequency of personal contact with faculty members has been insufficient.

This particular ICA factor is selected for analysis because its content suggests that it might be affected by faculty traits and because it has been shown to be related to several important educational outcomes. Astin and Panos (1969), for example, found that concern for the individual student was associated with decreases in students' degree aspirations, with changes in career plans, and with student persistence in college. Astin and Bayer (1970) have also shown that this measure is negatively associated with the incidence of campus unrest and student demonstrations.

How, then, does this aspect of the college environment develop? What are the critical ingredients that determine the students' perception of the institution's concern for them. In research on college impact it is almost axiomatic that the college environment is highly dependent on the characteristics of the student body -- the student peer group. But how crucial are other factors? What about structural attributes, such as size, location, and physical plant? And how important are faculty attributes?

The characteristics of faculty are of special concern, since faculty may largely determine such fundamental institutional characteristics as admissions policies, curriculum, course requirements, and so forth. Furthermore, since it is the faculty, of all the employees of the institution, who are most likely to have direct contact with students, they also would appear to have the potential for making the biggest impact on the students.

Research Objective

Most college impact research to date has employed the institutional environmental measures derived from aggregated student reporters, and it is not surprising that the research generally focuses on the link between these variables and student performance, or change. However, environmental measures and students' outcomes are both to some extent determined by the student's backgrounds, perceptions, and subjective appraisal of "factual" information about their institution. While it is of course important to know how students are affected by college climate factors such as Concern for the Individual Student, it is perhaps equally important to learn how these environmental attributes develop, to understand; if you will, the genesis of the college environment. Such knowledge is particularly important in the event that an institution may wish to change its environmental characteristics. Admittedly, the student peer group is a primary and integral part of the college environment, but so also can other groups of persons (particularly faculty) and structural characteristics of the institution have an impact on students. Although it is generally assumed that the student-derived "climate" measures such as Concern for the Individual Student are indeed reflecting factual data about faculty attributes and behavior, such an assumption has not been tested systematically with

independently derived faculty data from a national sample of colleges and universities. This paper presents a preliminary and exploratory analysis to document the actual relationship between students' assessments (perceptions) of the college's concern for them as individuals and independently derived information on the institution's faculty and other institutional variables.

We focus in part on faculty "quality" measures as they relate to students' perception of the college environment, since traditionally a faculty member's credentials and scholarly productivity have been the primary evaluative criteria for decisions in recruitment, promotion, and general advancement in the academic reward system. Indeed, even when teaching effectiveness is assumed to be considered, primary consideration is given to scholarly research and publication -- not information based on classroom visits, systematic student ratings, student performance on examinations, or similar sources (Astin and Lee, 1966). Nevertheless, the actual link between research activity and teaching performance, which is one of the more direct means of faculty impact on students, is subject to wide debate. Gaff and Wilson (1971) indicate that faculty at four-year colleges and universities generally believe that research improves the quality of teaching and the authors propose that more emphasis be placed on research and scholarly activity as a means to enhance the quality of teaching in higher education (p. 478). Cutten (1958) and Sample (1972), on the other hand, suggest that teaching performance and research activity may be antithecal. Jencks and Riesman (1968, pp. 532-33) believe the research vs. teaching issue is a false one however. They indicate that they find no evidence that the two are antagonistic, though they caution against judging teachers by their scholarly outputs. More recently, Harry

and Goldner (1972) present empirical evidence from a single institution study which indicates no relationship between student-rated adequacy of teaching and the extent of a teacher's scholarly activity.

Specifically, we address ourselves to the following questions:

(a) To what extent is Concern for the Individual Student related generally to faculty background variables, professional activities, and attitudes; and specifically to measures of faculty "quality"?

(b) Are these relationships mediated by student body characteristics, or by institutional structural variables such as size and type of institution?

(c) What are the <u>independent</u> contributions of faculty, student body, and structural variables to Concern for the Individual Student?

There are clearly substantial interrelationship among these sets of variables, as has already been documented by several researchers (Astin, 1968; Centra, 1970). Moreover, these three -- faculty, student, and structural -- probably interact in their effects on environmental scores of institutions. This paper is addressed to these considerations as well. In summary, our research question is: How well does the student-derived index for the college environment measure of Concern for the Individual Student reflect faculty attributes at the institution; and to what extent do such measures simply indicate basic attributes of the student body or of institutional structure?

Data Sources

Data were derived from four separate research files available through the American Council on Education's Cooperative Institutional Research

Program (CIRP): (1) The criterion data were derived from Astin's (1968) ICA factors, which were calculated for 246 different institutions using data obtained in the 1967 CIRP followup of 1966 entering freshmen; (2) Student input scores were obtained by aggregating student responses to individual items from the 1966 CIRP freshman survey and 1967 followup separately by institution (e.g., the percentage of men, or the mean high school grade of the entering freshmen); (3) Faculty scores for each institution were obtained by aggregating, separately by institution, item data from the spring 1969 survey of faculty at 303 CIRP institutions conducted jointly by ACE and the Carnegie Commission on Higher Education; (4) Institutional structural data were obtained from the ACE master institutional file, which is based primarily on the U.S. Office of Education's HEGIS-II reference file. While the information for these four sources was derived in different years, it is assumed that the aggregated institutional data are relatively stable, at least over a few years, so that they adequately characterize the current institutional climate, student body, faculty, and structural attributes of the institution.

The merging of information from these research resources yielded complete data for 225 colleges and universities, which represents about a nine percent sample of the population of approximately 2500 higher education institutions in the United States. The sample includes 55 universities, 148 four-year colleges, and 22 junior or community colleges.

Environmental Measure

The dependent variable for this analysis was the ICA image factor, Concern for the Individual Student, developed by Astin (1968) and obtained from the 1967 followup of 1966 freshmen (see Bayer et al., 1970).

Student Input Characteristics

Forty-one student input variables were employed as independent variables for the analyses. Item data from the 1966 CIRP freshman survey (see Astin et al., 1967) and 1967 followup survey (see Bayer et al., 1970), were aggregated by institution (as percentages of students or means for all students). These variables included aggregated information on demographic attributes (e.g., percent male, percent black), socioeconomic background, high school background and achievements, educational aspirations, financing for college, major fields of study, and experiences during the first year of college.

Faculty Attributes

Faculty variables were obtained through a collaborative survey by the Carnegie Commission on Higher Education and the American Council on Education. These data were collected in 1969 through a survey of 100,000 college teachers in CIRP sample institutions, to which 60,000 responded (Bayer, 1970). Institutional aggregate data were developed on 40 faculty variables, including demographic attributes (e.g., percent male, percent age 35 or less), educational background, specializations, classroom teaching practices, attitudes toward education, and occupational and professional experience.

Particular emphasis is on five aggregated faculty "quality" measures. These measures include the percent of Ph.D.s on the staff, the percent of faculty with their highest degrees received from the nation's top-rated 12 institutions (Cartter, 1966, p. 107), the percent subscribing to 3 or more professional journals (a proxy for currency with one's field) and the percent with at least one publication and the percent whose interest is more in research than in teaching (proxy measures of "productivity").

Structural Variables

Eighteen measures of institutional characteristics (Creager and Sell, 1969) were also included in the analysis. These variables include measures of institutional type, level, control, race, enrollment size, revenues (affluence), and location (geographic region and size of community). Several of these measures are employed in the regression analyses as dichotomized "dummy" variables.

Analyses and Results

Student Correlates

Twelve of the 41 student variables entered as predictors of Concern for the Individual Student, yielding a multiple R of .77 (Table 1). Four of these variables had to do with career plans of students entering the institutions: institutions with relatively high proportions of students planning careers in either English or the social sciences were rated as high in Concern for the Individual Student; low ratings were obtained at institutions with large proportions planning careers in engineering or business. Students from public high schools were more likely to attend institutions that were low on concern; a concentration of students from small towns was related to a higher score. Where there were higher concentrations of Jewish students, and high average high school grades, there was a lower assessment on Concern for the Individual Student. Finally, institutions were rated high where large proportions of students were on scholarships, where many depended on parental aid, where few failed their course work, and where there was minimal use of institutional health care facilities.

These data might be interpreted in several ways. That is, students with certain kinds of characteristics may be more negative in the

subjective rating of their institution (e.g., students from small towns may take a more favorable position toward higher education; the rigorous requirements for those in engineering may yield a more negative institutional image); or students with particular characteristics may provide a peer group climate conducive or adverse to the institutional score on Concern for the Individual Student (e.g., students from small towns may be more friendly; or students in engineering may have less interaction with their fellow students); or students with particular characteristics sort themselves in different institutional environments (e.g., small town students may tend to go to smaller local institutions where there is greater concern for the individual; students planning to major in engineering may more likely attend multiversities and larger institutions where there is less concern for the individual).

It is likely that all three conditions operate to some extent. Individual characteristics and "location" may effect students' perceptions of the college environment, as Feldman proposes; the aggregated characteristics of students reflect some dynamics of the peer group which would affect perceptions of the total college environment; and some of the relationship is probably explainable by the fact that certain types of students sort themselves nonrandomly among particular types of institutions.

Introduction of institutional structural attributes in regression analyses will control largely for the latter explanation of the relationship between student traits and "climate." The additional statistical control for the student variables will largely account for the effect of both the student peer group and student attributes associated with the evaluation of concern for the individual student in higher education institutions. By then introducing faculty attributes in the prediction

equation, one can assess the relative independent contribution of faculty traits in effecting college climate.

Structural Correlates

Institutional variables alone can account for a great proportion of the variance in Concern for the Individual Student at the institutions. Among these institutional variables, size, not surprisingly, is the most highly correlated (negatively) with concern for the individual student (Table 2). Being a four-year college, and high in affluence, are positively associated with the criterion; public, technological, nonsectarian, and predominantly black institutions are negatively related to Concern for the Individual Student. In summary, these seven institutional structural variables "explain" about three-fourths of the variance in this ICA measure.

Faculty Correlates

Turning to faculty variables, we note that each of the aggregated "quality" measures has a negative association with students' assessment of the degree of concern for them as individuals at their institution. The two measures of "quality" credentials are only moderately related, negatively but not of statistical significance, to the criterion: Percent Ph.D.s (-.10) and percent with highest degree from a top institution (-.07). The three measures of "quality" scholarly activity do, however, have statistically significant relationships with the criterion: Percent subscribing to three or more journals (-.25), percent having at least one publication (-.36), and percent more interested in research than in teaching (-.49).

When all 40 faculty variables are allowed to enter through stepwise multiple regression procedures, none of these faculty quality indexes enter

with statistical significance in reducing the residual sums of squares. Of the 40, eight faculty variables entered (Table 3). This analysis resulted in a somewhat "better" prediction of the criterion ($\underline{R}$ = .84) than did the student variables alone, but a somewhat lower predictive value than the structural variables alone.

From Table 3 it is clear that the best single predictor of the criterion, from among the independently derived faculty variables, is the percent of faculty who report that they frequently see undergraduates informally. This positive relationship, and that indicating that the percent of faculty who report they discourage undergraduates is negatively related to the criterion, provide strong validity that the ICA measure on Concern for the Individual Student is indeed tapping something about faculty. Other faculty correlates emerging from the stepwise regression indicate that institutions with older faculty, institutions with low proportions of men, and institutions with higher concentrations of white faculty have higher ratings on Concern for the Individual Student. Institutions in which teaching assistants are not frequently used, and institutions in which faculty have high control over their classroom content, also rank higher on concern for the individual. After step two in the regression analysis shown in the table, all five faculty "quality" measures have non-significant partial $\underline{r}$s. That is, the negative influence of faculty quality is mediated through the frequency of faculty seeing undergraduates informally and the prevalence of use of teaching assistants.

Independent Effects of Faculty

In order to test directly the relative importance and independent influence of the faculty variables, a next step was to determine the persistence of the strength of the faculty correlates after control for

student variables and for structural variables. Table 4 shows the partial correlations of the eight faculty predictors which entered the stepwise analyses and the five "quality" measures, after control for the twelve significant student predictor variables and for the seven significant structural variables. When control is introduced for the student variables, each of the "quality" measures remain significantly and negatively associated with the students' assessments of the institutional concern for individual students. Indeed, for four of the five "quality" measures the partial rs were higher than the zero-order rs, indicating that the student variables operate as suppressor variables in these cases. Additionally, five of the eight faculty predictors remain statistically significant after control for the student variables. Clearly, student variables do not "explain" the variance in the ICA factor which is attributable to faculty characteristics.

Next we turn to the question of the degree to which the influence of faculty variables on institutional concern for the individual can be attributed to structural variables. The partial rs shown in the second column of Table 4 suggest that the structural and faculty variables are indeed redundant to a substantial degree. Of the eight faculty predictors in the initial stepwise regression equation, five have nonsignificant partial rs after control for the structural correlates, and the strength of the relationship for the remaining three drop considerably. Of the five "quality" measures, four have virtually no relationship to the criterion after control for structural variables.

In order to test directly the redundancy and relative importance of each of the two sets of variables, faculty and structural, we performed another series of analyses. First, we forced all significant faculty and

student predictors into regression, and then allowed free entry of all significant structural variables in stepwise fashion. We then reversed this procedure, forcing all significant structural and student variables, and allowed free entry of any significant faculty variables.

After the faculty and student variables were first entered to predict institutional concern for the individual, two additional structural variables entered and significantly reduced the residual sums of squares. These structural variables were enrollment size (negative, with an F in the final equation of 10.00) and control-public (negative, with an F in the final equation of 33.22). That is, the same two variables which were the first to enter in the analysis of structural variables on the ICA factor (Table 2) persist as significant predictors independent of both student and faculty attributes.

In the reverse procedure, in which significant structural and student variables were forced, and then faculty variables were allowed to enter freely in stepwise fashion, none of the faculty "quality" measures or any of the eight faculty predictors (Table 3) entered. However, one faculty variable did enter the final equation with independent power -- percent of faculty who consider themselves moderately or deeply religious (positive, with an F in the final equation of 7.06).

Discussion

Studies which involve faculty respondents rarely focus on the impact of faculty attributes and behavior on student growth and development. Rather, faculty studies generally emphasize professional aspirations and achievement and ignore student-faculty interactions and relations (e.g., see Brown, 1965; Brown and Tontz, 1966; Dykes, 1968; Parsons and Platt, 1968).

When research does concern itself with the impact of faculty on students, as illustrated by several of the studies cited earlier, it almost invariably employs only student respondents for assessing both the dependent and the independent variables. Such research, not surprisingly, reaches such conclusions as the following:

> . . . Students' discontent with instruction apparently stem from the recognition that the instructor is unable, either because of lack of knowledge or because of lack of planning, to provide a cohesive and meaningful sequence of instruction, or from the fact that he established unreasonable or capricious standards of evaluation or performance. (Deshpande, Webb, and Marks, 1970).

Such findings certainly support the educational folklore and "make sense," but are they "true"? Or are those students who express "discontent" also simply likely to <u>think</u> that their instructors "lack" knowledge, planning, or consistent standards? Direct measurement of these latter variables <u>from</u> faculty respondents are essential in the verification of such conclusions.

Similarly, such methodology, relying on students for information on both students and faculty, does not surprisingly lead to the conclusion of Feldman and Newcomb (1969), after reviewing such studies, that:

> Though faculty members are often individually influential, particularly in respect to career decisions, college faculties do not appear to be responsible for campus-wide impact except in settings where the influence of student peers and of faculty complement and reinforce one another. (p. 330).

The analyses in this paper provides a preliminary exploratory basis for studying the correlates of a principal measure of the college environment, a student assessment of the degree of concern for them as individuals at their institution, which is associated with several important educational outcomes. This student-derived measure is related to information derived directly from faculty, including measures of so-called faculty "quality". The methodology provides for the study of the relationship between faculty attributes and environmental assessments, independent of student attributes. However, student-derived measures of the institutional climate have been shown to be significantly related to administrative and structural measures of the college, such as type, control and size (Astin, 1968; Creager and Astin, 1968). These structural variables are, therefore, also considered in this paper.

The analysis of faculty correlates of Concern for the Individual Student, initially presented in this paper, would suggest a strong influence of faculty on students' perceptions of the college environment. All faculty "quality" measures, three of which were statistically significant, were negatively associated with Concern for the Individual Student; and eight significant independent faculty variables entered the prediction equation, yielding a multiple R of .84. Even after control for twelve student variables, strong and significant relationships persisted between many of the faculty variables, including each of the five "quality" indices, and the criterion measure.

However, when structural variables were considered, all faculty influences, except strength of faculty religious identity, were diminished to statistical nonsignificance. These results suggested that faculty may have little direct influence on the college environment, at least

that aspect of the college environment which is reflected by students' belief that their institution is a warm and friendly place where there is rapport between members of the campus community and in which they do not feel like "numbers in a book." Clearly, there is no evidence that a "quality" and credentialed Ph.D.-level faculty contributes to an institutional environment in which there is greater concern for students as individuals or, as a result, less student dissatisfaction, less campus unrest, less dropping out, or less change in career and degree aspirations.

On the other hand, institutional structure -- particularly size -- persists as a strong determinant of the institutional environment. Faculty influences are mediated primarily by institutional size, by control (public, private nonsectarian, Roman Catholic, Protestant), and, to a lesser extent, by level (two-year, four-year, university) and type (technical, liberal arts, teachers). These results support the thesis of Gallant and Prothero (1972) that institutional growth beyond some optimal limit leads to alienation, absence of community, and numerous other institutional attributes which are dysfunctional for all members of the campus community.

In summary, the results of these analyses suggest three general conclusions of utility to future research on college impact: (1) instruments to obtain student-derived assessments of college climate are useful and valid tools for determining intrinsic attributes of the college environment; (2) faculty attributes, including measures of faculty "quality", have only moderate or little direct effect on college climate, at least a climate having to do with students' feelings of concern for them as individuals at their institution; and (3) the pervasiveness of institutional structural attributes, particularly size, cannot be explained by either

the kinds of students or the types of faculty which may be attracted to or recruited by these institutions. These conclusions suggest that there is a continuing need for more research on college impact and college climate which will focus not only on students but also on the role of the faculty and of institutional structure. Such research can be directly applied to establishing sound educational policy and new educational programs.

Table 1

Significant Student Predictors of Concern
for the Individual Student
(N = 225 Institutions)

Aggregated Student Variables	Sign in regression equation	R	F Value: To enter equation	F Value: In final equation	Zero-order correlation coefficient
Percent planning career in English	+	.520	82.6	--*	.520
Percent planning career in engineering	-	.581	22.7	26.2	-.466
Percent attended public high school	-	.625	19.5	13.5	-.407
Percent reared in Jewish religion	-	.654	14.1	37.9	-.241
Percent on college scholarship	+	.688	18.9	25.3	.125
Percent failed college course	-	.701	8.0	11.9	-.395
Mean high school GPA	-	.716	8.2	6.1	.060
Percent major dependence on parental aid	+	.732	10.2	23.1	.231
Percent planning career in business	-	.744	8.9	13.3	-.272
Percent using college health care center	-	.753	6.9	15.4	-.090
Percent raised in small town	+	.767	4.8	13.6	.001
Percent planning career in social sciences	+	.769	4.2	7.0	.404

NOTE: Variables listed in order of entry in equation.

*Removed in final equation.

Table 2

Significant Institutional Predictors of
Concern for the Individual Student
(N = 225 Institutions)

Institutional Variables	Sign in regression equation	R	F Value: To enter equation	F Value: In final equation	Zero-order correlation coefficient
Enrollment size	-	.776	338.2	121.8	-.776
Control - public	-	.824	52.8	34.9	-.645
Type - technical	-	.847	29.4	46.3	-.264
Level - four-year	+	.857	14.7	12.1	.580
Control - private nonsectarian	-	.865	12.3	13.7	.107
Race - predominantly black	-	.871	9.5	8.6	-.069
Affluence - revenues per student	+	.875	5.9	5.9	.053

NOTE: Variable listed in order of entry in equation.

Table 3

Significant Faculty Predictors of
Concern for the Individual Student
(N = 225 Institutions)

Aggregated Faculty Variables	Sign in Regression equation	R	F Value: To enter equation	F Value: In final equation	Zero-order correlation coefficient
Percent informally seeing undergraduates frequently	+	.699	212.6	38.2	.699
Percent using teaching assistants	-	.764	51.2	27.2	-.574
Percent reporting complete control of class content	+	.796	30.4	31.8	.644
Percent born before 1919	+	.812	16.7	9.6	.243
Percent teaching 100 or more students	-	.823	12.2	8.5	-.275
Percent men	-	.830	7.7	8.3	-.440
Percent discouraging undergraduate visits	-	.835	5.4	6.3	-.450
Percent white	+	.838	3.8	3.8	.095

NOTE: Variables listed in order of entry in equation.

Table 4

Independent Relationship of Faculty
Variables With Concern for the Individual Student

	Partial r, Controlling for:		
	All Student Variables	All Institutional Structural Variables	Zero-order r
Significant Faculty Predictors			
Percent informally seeing undergraduates frequently	+.45	+.21	+.70
Percent using teaching assistants	-.48	-.04(NS)	-.57
Percent reporting complete control of class content	+.39	+.08(NS)	+.64
Percent born before 1919	+.10(NS)	+.13(NS)	+.24
Percent teaching 100 or more students	-.09(NS)	+.01(NS)	-.27
Percent men	-.06(NS)	-.20	-.44
Percent discouraging undergraduate visits	-.23	-.22	-.45
Percent white	+.15	+.01(NS)	+.09(NS)
Faculty "Quality" Measures			
Percent holding Ph.D.s	-.14	+.01(NS)	-.10(NS)
Percent highest degree from top 12 institutions	-.18	+.14	-.07(NS)
Percent subscribing to 3+ journals	-.27	+.01(NS)	-.25
Percent with at least one publication	-.41	-.03(NS)	-.36
Percent interest toward research vs. teaching	-.40	-.01(NS)	-.49

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