

DOCUMENT RESUME

ED 051 438

AA 000 710

AUTHOR Blackburn, Robert T.
TITLE The Professor's Role in a Changing Society.
INSTITUTION ERIC Clearinghouse on Higher Education, Washington,
D.C.
REPORT NO R-10
PUB DATE Jun 71
NOTE 25p.

EDRS PRICE EDRS Price MF-\$0.65 HC-\$3.29
DESCRIPTORS Collective Bargaining, *Faculty, *Faculty
Evaluation, Faculty Mobility, Faculty Promotion,
Higher Education, Junior Colleges, *Social Values,
Student Teacher Relationship, Teacher Administrator
Relationship, *Teacher Characteristics, Teaching
Load, *Tenure

ABSTRACT

This review examines the import of current trends in higher education on faculty. It includes both a general discussion of forces influencing faculty life styles (with implications for administrators) and a critical review of recent research literature, including studies on such topics as supply and demand, mobility, collective bargaining, and evaluation of faculty performance. (WM)

ED 051 438

The Professor's Role in a Changing Society

REPORT 10

AA 000 710

THE PROFESSOR'S ROLE IN A CHANGING SOCIETY

Robert T. Blackburn

Report 10

ERIC Clearinghouse on Higher Education
The George Washington University
1 Dupont Circle, Suite 630
Washington, D.C. 20036
June 1971

FOREWORD

This review examines the import of current trends in higher education on faculty. It includes both a general discussion of forces influencing faculty life styles (with implications for administrators) and a critical review of recent research literature, including studies on such topics as supply and demand, mobility, collective bargaining, and evaluation of faculty performance. Robert T. Blackburn, Professor of Higher Education at the Center for the Study of Higher Education, The University of Michigan, has been actively conducting research related to faculty during the past several years.

The tenth in a series of reports on various aspects of higher education, this paper represents one of several kinds of Clearinghouse publications. Others include short reviews and bibliographies based on recent significant documents found both in and outside the ERIC collection. In addition, the current research literature of higher education is abstracted and indexed for publication in the U.S. Office of Education's monthly volume, *Research in Education*. Readers who wish to order ERIC documents cited in the bibliography should write to the ERIC Document Reproduction Service, Post Office Box Drawer O, Bethesda, Md. 20014. When ordering, please specify the ERIC document (ED) number. Payment for microfiche (MF) or hard/photo copies (HC) must accompany orders of less than \$10.00. All orders must be in writing.

Carl J. Lange, *Director*
ERIC Clearinghouse on Higher Education
June 1971

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. THE INFLUENCE OF SOCIAL FORCES ON FACULTY ROLE	1
III. CONSEQUENCES FOR FACULTY AND ADMINISTRATION	3
IV. LITERATURE REVIEW AND CRITIQUE REFERENCES	7

Author's Note:

Parts I, II and III contain no author names. Relevant references are inserted in parentheses. They refer to the alphabetical and numerically listed entries in the bibliography. Not every entry in the bibliography is cited. A briefer version of Parts I, II and III appeared earlier. [20]

Part IV identifies each author cited by giving the date of publication(s) in a typical journal style. It does not use the numbers which accompany the entries. Since the bibliography is alphabetical, this causes no confusion. Not every entry in the bibliography is cited in Part IV. However, every bibliographical reference is included in Parts I, II, III or IV.

This publication was prepared pursuant to a contract with the Office of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their judgment in professional and technical matters. Points of view or opinions do not, therefore, necessarily represent official Office of Education position or policy.

I. INTRODUCTION

The decade of the 70's has begun in an atmosphere considerably different from the 60's. The challenge then was to produce PhDs to meet the competition of the Russian space program by stocking our universities with scientists and, in turn, augmenting the staffs of research and development groups. This expansion of university programs in the applied sciences was matched by the social sciences, as social reform measures gained momentum. Federal legislation funded social science research. Jobs were plentiful to fill the demand by new governmental agencies especially created to act in these areas. Meanwhile colleges and universities were given funds to increase their faculties as well as their physical plants, for it was feared that too few teachers and not enough classrooms were available to accommodate the predicted increase in enrollment.

Today a famine afflicts higher education, a condition many in the field never thought possible—particularly in view of the optimistic outlook during the 60's. A surplus of PhDs, a lagging economy, shrinking student enrollments, and social upheavals have greatly sobered the original forecasters. On a national scale, higher education now suffers from an epidemic of blights that afflict all institutional environments regardless of endowment.

History shows colleges and universities to be among the finest of surviving social institutions. In spite of traditional faults and a perennial need for reevaluation, few other institutions have been as beneficent to individuals and to society. It goes without saying, contemporary man needs

healthy institutions for the socialization and academic training of youth and for the dissemination of knowledge and proliferation of experts in diverse fields. Given these premises, the nature and growth of an institution's faculty is absolutely essential if higher education is to maintain a balanced and progressive movement into futurity.

There are some fundamental issues that need exploring to enable faculty to effectively contribute to their institutions and society, as well as to realize their own professional ambitions. Some of them are: What factors affect faculty careers? What working conditions hinder job performance and how can they be changed? What can be done to permit faculty to respond to changing social conditions without jeopardizing their careers as well as their traditional "disinterested" posture? What role should the faculty play with respect to pressure from minority groups, whose needs differ from those of previous generations of students and who now seek places on the faculty as well as admission to colleges and universities.

This paper will examine these issues. Part I assays the social forces currently acting on higher education that have an immediate impact on faculty role, the principal consequences of these forces, the changing nature of policy-making at colleges and universities, and the implications of these changes for administrators. Part II reviews the literature in these areas and includes recommendations for further study. An extensive bibliography concludes the report.

II. THE INFLUENCE OF SOCIAL FORCES ON FACULTY ROLE

Impinging social forces

External forces seem to initiate more change in an organized group of people than pressures to reform from within. The extent to which colleges and universities are now affected by conditions outside the academy is noteworthy. In fact, the principal determinants for a change in faculty role almost exclusively come from outside the professor's control.

Acknowledging that oversights are committed when a complex of ideas is simplified, five social forces outside the immediate range of faculty influence have been isolated as deserving treatment: widespread economic problems and

their impact on the university, faculty unionization, the surplus of PhD's, the levelling off of university growth trends, and changing social values and priorities.

Widespread economic problems

The matter of dollars is of prime importance. At present, financial support for higher education is declining rapidly, and there is no indication that a reversal will occur in the next 5 years. When the Kerr Commission launched its assessment of higher education, fiscal resources received highest priority and optimism accompanied the panel's

early discussions. Today, a short time later, pessimism pervades their reports. War and inflation have taken their toll, along with the rising priorities of many large scale and vitally important social problems—the poor and the cities, to name only two. Coupled with the wait-and-see attitude on the part of the Government, even the spirits of inveterate optimists flag.

In short, a severe money shortage exists and is persisting. In all probability it will cause faculty to seek a means to deal with the present economic environment. One such means is collective bargaining.

Faculty unions

Some time ago labor leaders turned their efforts toward the organization of white-collar workers. These efforts were inaugurated in a time of ample job opportunity and in an expanding market. They were not prompted by the need for self-protection or in fear of economic uncertainty. Collective negotiations in the teaching profession date back several years now, especially in the elementary and secondary schools. More recently, and aided by legislation permitting the formation of bargaining units for public employees, the movement spread to community colleges, where a number of strikes have occurred. Now it has reached 4-year and graduate institutions. Nonacademic employees are bargaining, striking, and winning an ever increasing proportion of a limited yield. Nonorganized faculty are realizing they are getting what is left over after all others have had their part.

Surplus of PhDs

About 20 years ago the nation's burgeoning system of higher education had a faculty shortage and there were highly respected and responsible spokesmen who issued stern warnings about the necessity to step up productivity to meet the demands of the future need. With two exceptions (17, 35) predictions of tumbling standards, unqualified professors, and the like—all caused by an inadequate supply of PhDs—have continued into the new decade. Only very recently did higher education fully realize that the impossible had happened (37,38,39,40,178). The "unresponsive" graduate schools increased their production of new doctorates to a point where PhDs flooded the market. Cut-backs within the science establishment and elsewhere have released nonfaculty PhDs to the market. In addition, the time it takes to earn a PhD must be kept in mind. While industry can place a new product on the market in say 2 years, graduate schools are programmed over a much longer cycle. Even if graduate student enrollment were stopped today, a large number of new doctorates would still be awarded over the next 5 years (3,41,91). The most telling factor in the

decade beginning in 1978 is that 3 million fewer students will be enrolled at degree-granting institutions of higher education (201); this will cause both the short- and long-term need for PhDs in colleges and universities to diminish appreciably. With the end of growth, fewer students will be attracted to an academic career where competition has stiffened, turnover appears negligible, and where little chance for advancement and years in the lower professional ranks seem inevitable.

The levelling off of growth

While it is generally true that many private colleges and universities ceased expansion several years ago, there are differences in degree. For example, a few institutions decided on philosophical grounds to remain at their current size. Growth was an option for the future. Others—especially private liberal arts colleges—committed themselves to expansion and accepted federal funds for that purpose. In general, both colleges and universities now find they are unable to expand in directions that seemed then but a matter of choice. Similarly, many institutions have reached a point where their growth rate is less than 1 percent a year. It appears these two categories of 4-year institutions have levelled off in growth.

Even emerging universities, institutions seeming to have unlimited growth potential, are expanding in very restricted ways—for example, an increase in absolute numbers of students, but not with an increase in program development. Emerging universities aiming at multiple PhD programs simply cannot acquire them.

Furthermore, institutes, centers, and research and development laboratories are cut back. Their existence promoted growth, even when student size remained constant. They permitted institutional flexibility and the exploration of new ideas, but are fast disappearing.

One possible exception to the general levelling off of growth is the junior or community college. Their predicted expansion undoubtedly will materialize. However, two factors must be considered: (1) some states have a full quota of community colleges and growth will take the form of increasing the size of existing institutions; (2) other states will begin new educational systems. (The impact of junior and community colleges on higher education by the creation of doctorates designed for teachers on this level is discussed in Part III.)

Decreased mobility, the difficulty for advancement from within, and other consequences of nongrowth have had and will continue to have a great effect on faculty.

Values and priorities in flux

The final social condition to be singled out is the changing values of young people and others. To them

truth has a higher value than loyalty to an institution, individuality is more prized than organizational identification, and human needs have priority over technological innovations (16). Civil rights and the war on poverty to some are more pressing concerns than obtaining a university diploma.

One immediate consequence is that if colleges and universities are to maintain their certifying role in society, persons previously excluded from higher education no longer can or will be. While many faculty take a liberal view on social concerns by asserting higher education is a right, not a privilege, many frequently claim the right does not

apply to their college (203). Such a contradiction is irreconcilable with the prevailing mood in society.

Although the faculty of our colleges and universities are overwhelmingly from the white, male establishment—a group that has increased in percentage during the faculty shortage of the 1960s—blacks and women will increasingly demand and gain their place in higher education and are beginning to receive the attention they merit. Given the general position that there should not be second-class citizenship for anyone, pressures for position and advancement will take on new significance and greatly alter the present composition of faculty across the country, with an accompanying change in faculty role.

III. CONSEQUENCES FOR FACULTY AND ADMINISTRATION

Some general matters

Several consequences follow from the social forces just examined. From economic constraints alone, colleges and universities are more vulnerable to outside pressures as internal freedoms wane. Those in control of resources, whether private donors or state legislators, can dictate policy. Retribution is visible when those hostile to higher education gain ascendancy. Economic constraints are not unlike those of imposed martial law. Vacating a position no longer means an automatic replacement, deans will tell faculty, as central administration increases its control of the allocation of human resources.

Nongrowth places additional burdens on administrators and faculty. Colleges and universities long have been able to report they are larger this year than last. In good American tradition, bigger always has meant better. Now other criteria will have to be substituted as a meaningful measure of accomplishment. They will not be as easy to justify.

Trends indicate that faculty someday will organize and engage in collective negotiations. The oversupply of PhDs and shaky economic condition may very well accelerate this phenomenon (146). As jobs become scarce, conditions affecting continued employment become less certain (204). Already reports circulate that AAUP (American Association of University Professors) has been sought out by faculty groups protesting the encroachment of board members in the internal operation of the college. Other reports have been heard where faculty were released because their institutions claim no clientele exists for their services. These happenings, undreamed of as short as a year ago, will hasten the formal organization of faculty into bargaining units, unionization serving a protective function.

Unionization also will centralize major decisionmaking and facilitate the establishment of hierarchical relationships. Faculty will have a say in decisionmaking, but it will occur only once a year and then across a bargaining table. Thus, a small faculty group will represent all, with power

gravitating toward the top and peer control diminishing.

Despite faculty efforts to control their work environment, faculty workload will alter. Requests that it be increased are completely unrealistic. Study after study shows that faculty work approximately 57 hours a week, with no compensation for overtime (4,81,152,213). It is not realistic to suggest that this number of hours can be increased. The only alternative is for reallocation of time. If faculty are given an additional number of students or courses, a reduction in the number of assignments will occur—the number of essays written in an English course, for example, would be less.

Another general consequence affects white, male professors—the old oligarchy. Already visible in public institutions dealing with government contracts is the distribution of personnel. Blacks, women, and other minority groups will have first opportunity to fill the shrinking number of vacancies.

The private liberal arts college ordinarily does not suffer the same pressure and, for the most part, has not been responding. However, as the small private college becomes increasingly dependent upon public funds for continued survival, pressures will mount. During the period of faculty shortage, the private liberal arts college sometimes gave tenure to poorly qualified professors. Again, no growth and reduced mobility mean minimal openings. Even if there were no outside pressures, increased opportunities for blacks and women would result from the change in social values.

Changing priorities will have other consequences. Universities, despite their dependency on federal finances, eventually are going to eliminate classified research, training for the military, and related activities.

Value changes also are going to effect individual professors. Reassessed values will mean some very difficult career decisions, especially for young faculty. For example, not so very long ago a man could make an intellectual commitment

to some area of study that interested him. What does he do when no students want a course in the area he has devoted his academic life to? Are there alternatives open to such men? This is not an insignificant question.

Effects on individual faculty

The social revolution effects individual faculty values and can be seen as faculty interact with minority groups. One illustration is in respect to black students. Over the past 10 years, new curricula in 4-year colleges and universities have been aimed predominantly toward the student with high SAT scores. Honors programs and independent study typify what is new today (61). Curricular practices reveal faculty values and what the professor seems to want more than anything else is a more able student. Faculty in liberal arts colleges want the students Oberlin has; those in universities want what Harvard has. There is nothing morally wrong with this elitist stance or the concern for excellence and high accomplishment. Doing a job in the best possible manner is an honorable value; however, in many cases, such desires also carry with them racist overtones. Concentrating on activities for which the less privileged are judged unqualified is no longer tolerable. Blacks and others have both the right and privilege to an A.B. from a respected college or university. Persons who see value in a degree should have the opportunity to receive a degree.

Admitting those whose chances for success are small according to current standards simply means that the traditional game played as well as those who play will be different. It is not a question of higher or lower standards; it is a question of different standards. And different standards mean a different faculty perspective, different allotments of faculty time and attention, different career patterns.

As mentioned before, faculty generally are for societal change in principle and in the abstract they support it (203). However, they have not vigorously acted to make ideals into realities. New pressures arise and new attitudes are established. Faculty must act to keep pace with changing social patterns.

A second major consequence affecting individual faculty members centers around the question of morale. Poor morale occurs from administrative actions prompted by the nongrowth of the system. Like other human beings, faculty find bad news depressing. When the preponderance of news is in that category—no money for that necessity, no funds for this emergency—despair sets in. Some faculty, who accepted their current post with the full intention that it was but a stepping-stone to Eldorado, are already festering in their present position. They could well become embittered as career paths and opportunities close.

In times of stress, the administrative tendency is to curtail formal meetings. Such a device protects administrators from hostile faculty questions and the dispensing of

more bad news. Meanwhile, informal faculty exchange takes place both on and off the campus. Distant friends are heard from. Remote colleagues are told of the professor's availability. Rumors flourish and spread. Consequently tension rises, conflict and confrontation increase, and students become excluded from decisionmaking. While the administrator gains in power, he could easily construct a state that would be most unproductive and unhealthy for his own organization. If unionization also comes about, collective bargaining introduces new complications. This model of faculty and administrative interaction is an adversary relationship, and not one of colleagues (67,90,158,172,184). Friendship patterns change. Administrators ponder what role exists for them as academic leaders. Finally, work overload and stress go hand in hand causing performance effectiveness to drop (45,73). All of these possibilities could materialize and will require a sympathetic and talented administrator to deal with each problem as it arises.

Organizational and administrative implications

One obvious consequence involves recruitment and retention of faculty. Because of the market oversupply, the faculty mobility rate has dropped sharply. Popular literature leads the uncritical reader to believe that it is much higher than the current 6 percent level. Even that low figure will drop (28). Thus, earlier mobility studies lose some relevance (28,50,69,70,77,103,161). The institutional advantages of reduced cost for recruitment and of increased assurance that programs will not suffer from staff turnover are as obvious as is the disadvantage of the missed infusion of fresh ideas new faculty bring.

The saving of dollars, however, may be inconsequential in comparison to what can happen once institutional growth has stopped. Administrators are unaccustomed to dealing with a situation where the slack in the organization has been taken up. When the only resources available to begin something new come from eliminating some ongoing program, new problems are created. Elimination and reallocation are more difficult for the administrator. He just can't keep saying "sorry, but we don't have the funds." Continuous stifling of faculty ideas can be the death of an institution. If administrators are unable to find creative ways for faculty growth and development, they may be able to manage their institutions *but* they will be very sterile and unexciting organizations.

Growth has solved many organizational and institutional problems for a long time. As long as the college is growing, attention gets directed to the areas of growth. Excuses for ignoring the past and the present are readily available. Growth even avoids the deadwood problem, for such individuals can be gotten around, outflanked, and ignored. Also, growth provides an acceptable criterion of success and reduces the amount of external flack.

Losing growth is no idle loss. For example, those institutions that supposedly had stopped expanding—Chicago, Yale, Harvard, and a few others—really had not. They escaped much personnel suffering by continually expanding their marginal activities. As long as centers and institutes were being founded and merged, a large number of people were supported and a fair amount of mobility took place. Positions were created and overall happiness was rather high. There was concern about voting rights and leave eligibility (131), but there were no serious morale problems, even with small turnover (177).

Today, however, it is extremely difficult even for a Harvard to hire a young man of brilliant potential and then later have to let him go because there is no position for him to advance to within the organization. This more than dampens spirits; it raises the tension level appreciably. Will an older man leave? Die? The young faculty member broods and finds himself in an unhealthy competitive position with respect to his junior colleagues.

Having to let an able young person go is harmful to a senior man as well. To simply say; "Sorry, you are really very competent. I wish you could stay," is no consolation. Moreover, when Chicago and Harvard formerly had to turn out a protege, they at least could be assured of finding him a very good position. Now not even that is the case. Sponsorship, a fundamental professorial role, is all but over.

If unionization also becomes a reality, other stresses will be placed on faculty-administrator relationships. With collective negotiation, previously unwritten practices will become formalized in highly specific contractual arrangements. The equipment in the office, the number of students in a course, the daily schedule of classes, the academic calendar—these and other matters now become contractual considerations (32,52). No longer is there any ambiguity as to whether a department head is an administrator or a professor. The good-natured faculty sport of dropping disparaging remarks about administrators now enters the argot with intensesness and seriousness (88,89).

It also seems likely that a unionized faculty implies that students will have less voice and participation in academic affairs. Student inroads will slow down, at least for a while. Faculty will be concerned about protecting the gains they acquired, which did not include students making decisions about hiring, salary, promotion, curriculum and the like. This does not mean that students will no longer exert pressures for reform or change. It does mean that relationships they might have established with faculty—ones proceeding at best slowly and with minor faculty concessions (21,42,95,140,170,226) will take on a new character.

Finally, the matter of oversupply means that the evaluation of faculty will be of even greater concern. Faculty will learn quickly that judgments made on promotion and tenure will now become more severe. Faculty will indeed be hired on a trial basis and competition will be intense. More beginning faculty will go out rather than up. The time lapse to the full professorship will revert to a longer interval. These factors will increase tensions in

academic men. Faculty know that workload demands will increase and that needed fringe benefits will not materialize. When it becomes clear to faculty that funds are in fact limited, they will agree to teach more students than they currently do. The student-faculty ratio, almost constant over the past 10 years, will rise appreciably (201).

The concern over what is an appropriate course load and the manner in which faculty are evaluated on the job will increase. Those neglected studies on faculty workload will be revived and redone (31,125,175,205). The faculty's concern about the method of judging their work has drawn many faculty complaints but rarely has the issue been faced head on (13,63,97,99,179,199,217). Confusion on the relationship between teaching and research abounds (24,101,116,119,151,211,223). Conflicting assessments of even agreed upon criteria exist (19,44,117,149). Much work needs to be done here. Unquestionably, faculty values and life styles are going to be drastically altered in the process of reevaluation of faculty performance.

Junior/community colleges

The 2-year colleges are the institutions for which exception to the above remarks must be taken. The number of community/junior colleges are projected to increase at a rapid rate for several more years. Until now they have been a system unto themselves. While clearly post-secondary and with transfer programs designed for 4-year colleges, they frequently hold to many of the secondary school accoutrements. Yet with a style of their own, community/junior colleges frequently fall outside the remarks made above. Furthermore, should they significantly alter their present practices, some of the consequences just stated would require modification.

For example, the extent to which junior/community colleges will hire PhDs remains unknown. The percentage of their current faculty holding a doctorate rarely exceeds 10 percent on any campus. Besides, the holders are frequently department or division heads and hence "outside" the faculty. They are administrators, one step removed from faculty in the peer sense and an infinite distance away in a legal sense when collective bargaining operates.

Yet several factors suggest the unlikelihood of these colleges absorbing the PhD oversupply. Until now the community/junior college has had minimal drawing power for new PhDs. Almost invariably the community/junior college faculty member with a PhD has earned the degree some time after joining the staff and has made a commitment to that level of instruction.

Furthermore, the recent recipient has neither been trained to teach in a community/junior college nor has he had any desire to cast his lot with these institutions. In the buyer's market there was no need to. At the same time, some deans in community colleges suffered from the turmoil fledgling scholars can create. They want to raise admission standards, to offer more advanced work, to

expand to a 4-year institution—all goals contrary to the community college mission. Administrative reluctance to seek PhDs is understandable. A major metamorphosis both in faculty values toward teaching and also in community/junior college receptiveness to such individuals will have to take place before these institutions will hire the oversupply. Budget considerations and salary schedules may also make someone with a PhD unattractive.

Meanwhile, universities are introducing the Doctor of Arts degree (129). This "teaching" doctorate is designed for the community/junior college. However, converting those in graduate school who have made a commitment to the PhD to a new and untested DA, a degree that initially will be viewed as less than a mint certificate, seems an unlikely alternative—so does expecting a graduate faculty to quickly and enthusiastically change its aim from training scholars to preparing teachers for community/junior colleges.

While the inferences drawn in the sections above apply primarily to 4-year colleges and universities, the junior/community college faculty member and administrator can extrapolate the effect on himself and his college. For example, if the junior/community college opts for increased expertise as measured by a graduate school pedigree, it can do so quickly and effectively if it is still expanding. (Once growth stops, tenure prevents great change in personnel.)

Conclusions

First reactions are pessimistic and for good reason. First, reallocation of faculty activities means that the solution to problems affecting people and society is likely to be delayed. Also, a primary aim of colleges and universities, the production of new knowledge, is not going to proceed at as rapid a rate as it has in the past. The activities of higher education will continue, but its priorities will have to be reordered.

That revolutionary change will polarize some individuals is a second undesirable consequence. Extremists at both ends of the spectrum may shut out new ideas; however, these faculty are not likely to prosper in an austere climate.

In this same vein, at least while faculty reeducation is going on and new life styles are emerging, many will devote their energies to issues peripheral to the central goals of colleges and universities—those goals being teaching, research, and service. The time spent on internal procedures and dealing with controversy will delay the achievement of desired ends.

On the plus side, there are many potentially excellent outcomes that far outnumber and outweigh the minuses. Major change prompts self-examination, reassessment, and affirmation of basic values. A reevaluation of faculty role in higher education would be a healthy activity. Faculty talk about an increased voice in academic governance and believe they should have more say; yet they seem unwilling to participate (62). Collective bargaining places faculty on decisionmaking bodies that decide budgetary matters, thereby giving them an increased influence on the allocation of resources.

Also, more varied and legitimate careers will be available to faculty than have heretofore existed. Service will now have a higher value. Faculty who are not personally attracted to scholarship and publication (and the majority publish little or no research) can be freed from living under false pretenses. This is a healthy outcome.

In addition, indications from institutions that have bargained for a few years are that the initial faculty-administrative adversary relationship mellows except at contract time, of course. Faculty attention does return to the business of curricula and programs. In this same transition period, increased openness of the operation emerges. New roles develop.

Another positive outcome of the present turmoil is the fact that the oversupply will raise the faculty talent level. Thus weaker institutions can become much stronger in much less time. Newly forming universities can acquire an extraordinary faculty at the outset. The "have-nots" will more closely approach the "haves." Higher education as a whole will be lifted appreciably. Surely this is an outstanding benefit.

Finally, the introduction of multiple cultures into our colleges and universities on both faculty and student level will be enriching for all. In the past, attending college has been more culturally broadening for blacks than whites. Now whites, too, can broaden and deepen their cultural understanding. Improvement of the human condition is worth many times the effort called for here.

In summary, while life will be different, the key changes are not to be measured in terms of better or worse. The temptation persists that the outcrop of benefits could have occurred more easily, rapidly, and extensively without the spur of a tightened economy and concomitant restrictions. "Theoretically" speaking, such a claim is difficult to refute; however, from a realistic point of view, attention would not have focused as it did if the hard facts of the matter had not put an end to an uncontrolled system of unrestricted expansion.

IV. LITERATURE REVIEW AND CRITIQUE

The basic literature undergirding the presentation of Part I is presented on a selective basis. Not every idea advanced in the arguments and predictions is mentioned, partly because of meagre research findings and, in certain cases, space restrictions.

Several factors frustrate the scholar seeking verifiable evidence to support assertions. First, too few studies rest on theory. Rather, they tend toward random data collection with minimum hypothesis testing. Secondly, too often the studies stand in isolation from one another. Whether from ignorance or communication breakdowns, investigators fail to recognize what others have done that bear directly on their own research. Thus, while the corpus of findings accumulates, it neither broadens nor deepens our understanding in ways it might. As a corollary, confusion results when two investigators study the same phenomenon but do so on noncomparable samples and with noncomparable instruments (e.g., student-faculty interaction in the classroom). Thus contrasting and validating results can suffer. The careful reader flirts with uncertainties when trying to draw warranted inferences, especially when alternative explanatory schema are easily generated.

Despite these serious shortcomings, the research on faculty is growing at an accelerated pace. Essayists who ignore the findings no longer should be tolerated. A short time ago a not atypical pundit opened his study with the remark that "faculty study everyone but themselves." With this gratuity he launched into his own undocumented interpretation of professorial behavior, implying all along that he was dispensing truth. An author offering similar introductory apologies today simply reveals his ignorance. From a paucity a decade ago, information in the field has expanded so rapidly that there is probably more research available on academic men than on any other occupational group.

Faculty in general

A few larger works speak to a variety of faculty concerns and contain evidence and critical analyses worthy of careful reading. Brawer (1968) has collected several studies on community college faculty. (The title of her study, *Personality Characteristics of College and University Faculty: Implications for the Community College*, is somewhat misleading; for the report, while comprehensive, has little information about faculty personality factors.) Gross and Grambsch (1968) report the findings of their national survey on the attitudes of faculty, administration, and other subgroups within 4-year institutions. The ranking of importance of various tasks make clear faculty values, show where students rate in their concerns, and so forth. Parsons and Platt (1968) studied faculty in eight colleges and universities using such variables as power, status, religion,

and others. For faculty values with respect to teaching and research in prestigious private liberal arts colleges, Klapper's dissertation (1967) and her findings in more synoptic form (1969) should be consulted.

Other studies are of general importance for those interested in the health and well-being of faculty and their vitality over a period of years. For example, Davis (1965) examined personal and organizational variables that relate to innovations in two liberal arts colleges. Evans (1968) investigated a faculty's reluctance to engage in educational television at an urban university. Two studies looked at personality variables of faculty—one by Pratt (1966) on factors of hiring and retention in community colleges, and the other by Sagen (1962) on job satisfaction in liberal arts colleges.

In a related manner, some studies now have been conducted that isolate variables related to organizational productivity and turnover. While some of these studies have been conducted primarily outside higher education (for example, Pelz and Andrews (1967)), their findings can be extrapolated into college and university settings. Pelz and Andrews found that a certain amount of tension is necessary for increased productivity and satisfaction. Their conclusions were not unlike those of Meltzer (1956), who found that a combination of freedom and support must be delicately balanced to maximize scientific productivity. Unlimited freedom and no funds or unlimited funds and no freedom are both unsatisfactory. Instead, there is an optimum condition in between. More recently, Wispe (1969) examined similar variables in psychology departments across the country. Factors such as size and prestige make a difference.

Other studies are beyond the boundaries of this paper. Administrators will turn to research that deals with workers on the job. These are going to be most important for the viability and vitality of colleges and universities as higher education moves into this period of limited resources and no growth.

The marketplace

Supply, demand, and mobility increasingly have caught the attention of students of higher education. The intensified concern began in the 1950's with this nation's decision to match Russia in her space exploitations. The cry from government offices, NEA, NSF, and others (well reported by Cartter (1965, 1967)) need no elaboration. Without exception the early studies predicted a faculty shortage that had no possible way of being remedied by 1970. In fact, for these reporters it was a matter of simple arithmetic to demonstrate that complete disaster would occur by the opening of this decade.

The all too apparent fact is that these projections were grossly in error. Embarrassment must be high. What is painfully obvious is that this country's graduate schools have produced PhDs at such an overwhelming pace that the supply has well exceeded the demand.

In less than 2 years the national emergency of under-supply has shifted to a crisis of oversupply. See, for example, Nelson (1969) and Cartter (1970a, 1970b, 1970c, 1971a, 1971b). AAHE (1970) reports nearly a 13 percent increase in PhD production over the previous year.

In the early 60s Bereleson (1960) challenged the shortage predictions. Shortly thereafter Cartter (1965) deciphered the data and reassessed supply and demand and gave predictions closer to the truth. Cartter dealt kindly with those who made the earlier gross errors. There is no doubt about the certainty of some of the variables. For example, the number of 18 to 21 year-olds at any given year is known with great precision for the next two decades. Other factors the age of faculty, death rate, and retirement may likewise be estimated with great precision. However, some variables will be extrapolated with less certainty. For example, the number of students who will go on to higher education must be estimated, as well as the percentage of PhDs who will seek positions in higher educational institutions. Recently, Cartter (1970c, 1971a, 1971b) made estimates in both of these categories. The interchange of highly trained talent among industry, government, and higher educational institutions remains unknown and likewise affects the actual situation at any given moment. For example, today many highly trained industrial scientists are available for the few professorial positions available.

A third group of factors could make all of the predictions greatly in error. For example, what happens to the input and output of graduate schools is a crucial variable. It looks as if economic constraints alone will prevent emerging universities from offering an assortment of PhD programs. Glenny (1971) and Roose (1971) expect that graduate schools will adjust to the demands of the marketplace. What Glenny fails to take into account, however, is the approximate 5-year lag that exists in a system of this kind. Those already in the PhD cycle do not come out for several years. Hence adjustments in output will be long term in their effect.

Furthermore, current studies and projections fail to take into account how community/junior colleges will augment their staffing. They remain the principle growth factor left in the system. At present they have not taken steps to hire many PhDs; however, a Doctorate of Arts degree is now being launched and its attractiveness to a new clientele could greatly affect all of the predictions made thus far (Koenker, 1970).

The community/junior college variable is of such importance that studies of supply and demand must be undertaken. Other factors also dictate the need for sys-

tematic research in the field. For example, disagreements remain as to what the facts really are. Ferris (1970) cites Rogers (1967) that the percentage of PhDs on science faculties is actually diminishing and hence worries about deterioration. Cartter certainly would be the first to agree that others besides himself should be engaged in these studies. While his recent reports (1970a, 1970b, 1970c, 1971b) should be carefully examined, other economists and professionals in other disciplines could assist national concerns by fresh examinations of the data. If we have learned anything from the past, it is that small errors can make immense differences. The nation's supply of highly trained talent is too crucial to be left to chance.

The current oversupply obviously has immediate consequences. For example, some believe that job security will accelerate the overall trend towards faculty unionization (Logan, 1970). Others are concerned about the future if highly talented young people are discouraged at this moment in history from going on to advanced study (Glenny, 1971). While it was suggested that faculty selection will be on the side of the institution, it is to be sincerely hoped that those in a position to select new personnel will not ignore what has been learned about the type of person who becomes a college teacher. In this light, the earlier studies on attraction, retention, and job motivations of faculty by Stecklein and Lathrop (1960) and by Eckert and Stecklein (1961) gain in importance. Their research on a variety of institutions in Minnesota uncovered important truths. Also, the reasons why certain talented individuals become college teachers certainly should not be ignored when decisions are made between equally attractive candidates. Gustad (1960), Medalia (1963), Martin (1964), and Gaddy (1969) should be consulted when search committees make decisions.

Detailed studies on faculty working conditions also are important in this context. DeJesus' study (1965) on faculty at a large public multiversity, Lewis' research (1967) on the loyalty of faculty at an emerging university, and Balyeat's insitutional analysis (1968) about why faculty resign are important for administrative attention to faculty morale. For example, one of Balyeat's more salient conclusions is that faculty leave not because of attractions elsewhere, but because of frustrations and anger with their current work environment. Only then do they become receptive to outside offers.

Faculty turnover will continue to exist. Who leaves and who stays affects faculty morale. While probably not as crucial as economic factors at this time in history, mobility studies nonetheless retain their importance to the extent that they point up faculty values with regard to why academicians do what they do.

The beginning studies on faculty mobility were performed, not suprisingly, by economists, and sometimes on economists. Such is the case with Anantaraman (1961). Marshall (1964) looked at a selected group of faculty and the reasons they moved from one job to the next. His

hypothesis that housing was a key factor was not verified. Brown (1965) first studied three groups of social scientists' mobility patterns in the Southeast. With Tontz, Brown (1966) extended his study to include academic scientists. His final nationwide study for the Labor Department is reported in his book (1967).

Other research has been done on selected populations in higher education. Fincher (1968) examined the career patterns of physicists. Aurand (1971) is completing a study on academic musicians. There are significant differences between disciplinary faculty (Brown, 1967). The danger of talking about all academic men as being the same leads to serious errors.

More recently sociologists have examined academic mobility patterns and ignored economic variables. Hargens and Hagstrom (1967) compared academic scientists' mobility patterns on the variables of open market (contest) versus sponsorship. Crane (1970) looked at the relationship of university prestige and the career patterns of six groups of faculty—chemists, physicists, psychologists, economists, English faculty, and philosophers.

Kelly (1968) and Farris (1968, 1970) provide the first investigation of faculty mobility patterns and job seeking strategies of persons in 2-year colleges. Farris used the Caplow and McGee interview schedule but does not corroborate their findings. The mobility studies are important for revealing how institutional decisions are made and what faculty value. They suffer from the limitations that ensue when one theoretical model is employed. Sometimes geographical restrictions prevent generalizations; other times discipline differences are not always adequately accounted for. While it is expected that mobility will become less of a concern now that there is an oversupply rather than a shortage of faculty, these studies demand careful critique when future investigations are undertaken.

Collective Bargaining

Opinion pieces far outnumber empirical studies and no doubt will continue to do so for a few more years. Unionization and collective bargaining are recent phenomena in higher education, although in a few locations they date back half a dozen years. Furthermore, it is extremely difficult to conduct research about the process or results. Complexities strain attempts at controls and generalizations from unique situations are risky. Therefore, this section is brief, for not a great deal is yet in hand. Furthermore, it is concerned only with faculty and collective bargaining and does not include nonacademic employees, teaching assistants, interns and residents, and others in higher education moving into this area.

A brief look at opinion and experience does set a stage. Contingent upon one's particular allegiance to faculty or administration, collective negotiations have evoked concern (Livingston, 1967), displeasure (Davis, 1968; Kadish, 1968), and approval (Marmion, 1968). More directly, the

impact of collective negotiations within the junior/community college has been greatest to date within Michigan, Illinois, and California. In Michigan some twenty-four colleges have negotiated contracts, some with attendant work stoppages. Howe (1966) briefly describes the strike at Henry Ford Community College and urges less negativism and rigidity vis-a-vis collective negotiations. Swenson and Novar (1967) similarly reviewed the strike at Chicago City College, focusing upon issues such as lack of faculty involvement in governance, the use of shared facilities, and evidence of neglect by a board whose major emphasis was directed at elementary and secondary problems.

The tenor of the literature is interesting. Many of those associated with colleges and universities deplore the advent of collective negotiations as an affront to professionalism. Bierstedt and Machlup (1966), for example, take issue with the AAUP's decision to engage local chapters as bargaining units in extreme circumstances; i.e., Flint and Henry Ford Community Colleges. They feel that this approach will result in a loss of academic freedom and the sacrifice of professional status to employee status. Similarly, Heim (1968), Kadish (1968), and Livingston (1967) bemoan the implications for professionalism. On the other hand, Day and Fisher (1967), Marmion (1968), and Kugler (1968) feel that eventually the professoriate must embrace collective negotiations. They cite the inability of the AAUP to persuade the administrative echelon to permit more representation in college and university governance.

Within the junior/community college ranks the concern tends to be less upon whether one accepts collective bargaining, but rather upon how one is to live with it. Those associated with the California scene, where the existing statutes are somewhat circumscriptive, and perhaps concerned that they not be altered, argue for more faculty involvement in governance. Thus Priest (1964), but more particularly Lombardi (1966), argue for less lip service by administrators about faculty participation in governance and more creativity and initiative toward that end. Howe (1968), on the other hand, views collective bargaining as evolutionary, appropriate, and logical. Frankie and Howe (1968) do question the apparent eschewing of the abstract, theoretical, and academic considerations for the emotional; and they are concerned with the failure to date of collective negotiations to result in a creative approach to the solution of problems.

For a more thorough treatment, the uninitiated might best begin by turning to recent bibliographic collections (some of which are annotated) and let these documents guide his reading. Without exception, the entries are overweighted on collective negotiations in the elementary and secondary schools. The reader therefore must extrapolate what applies and what does not—no straightforward task. Nonetheless, the beginner would be well advised to look at Markus (1968), Piele and Hull (1969), ERIC (1969), and Gillis (1970).

While cited in the works just listed, some general studies deserve mention as good places to begin. Two are by

Moskow (1966, 1968). His more recent work is addressed specifically to higher education and is a collection of papers presented at a research symposium. Nolte and Linn (1968) also have collected important background material. Howe's experience (1970) on both sides of the bargaining table in community/junior colleges in Michigan is brought to bear on the topic. Lieberman and Moskow (1966), Stinnett, Kleinmann, and Ware (1966), Schmidt, Parker, and Repas (1967), Elam, Lieberman, and Moskow (1967), American Association of School Administrators (1968), Rehmus and Wilner (1968), Shils and Whittier (1968), and Carlton and Goodwin (1969) also give general presentations.

The few studies that have been completed merit examining in detail. For example, Bylsma (1969) in studying Michigan community colleges found that the changes taking place in administrative-faculty relationships were independent of the size of the community college, the specific nature of the bargaining unit (AFT, NEA, or Independent), and the geographical (metropolitan or smaller) location. Creal's Michigan study (1969) found that the impasse factors in the negotiation process were appreciably mitigated when those on both sides of the table were knowledgeable about colleges, held to agreed upon deadlines, and entered the process with positive attitudes regarding outcomes. In Illinois junior colleges, Gianopoulos (1970a, 1970b) examined the emerging role of the president as a middle man, a mediator between faculty and board. Lane (1967) studied a faculty of a western state college and their attitude toward unionization. In comparing those favorably disposed versus those opposed, he uncovered no differences between the two groups with respect to the extent of their education, rank (age held constant), value on teaching versus research, publishing record, and membership in professional organizations. However, "unionists" are younger and have a much less favorable assessment of administrators such as department heads, and especially deans.

The *Junior College Journal* can be consulted for dissertations in progress. For example, Gram (1971) is studying the economic factors with respect to gains and costs after contracts have been negotiated in a community college system. McCarthy (1971) is comparing presidential satisfaction in community/junior colleges that have undergone collective bargaining with those that have not. A number of PhD students working with me have completed unpublished pilot studies about faculty desires to engage in collective bargaining. These have been conducted at an emerging state university in Wisconsin, at different kinds of universities in Michigan, and in an assortment of community colleges. Perhaps the most striking finding consistently appearing in these investigations is that a professor believes other faculty do not want to become unionized even though he himself does. Put another way, the belief is that unionization is antiprofessional and hence contrary to faculty values; consequently, most faculty oppose unionization. However, the belief is not shared by individual

faculty. Thus, faculty misconceive their colleague's view of the phenomena. More are in favor than they believe to be the case.

Finally, Daniel Van Eyck at the American Council for Education is collecting an extensive corpus of materials. These are contracts, newsletters, and other fugitive pieces, and are available in his office. He also reports that the forthcoming spring issue of the *Wisconsin Law Review* will be the best coverage of the phenomenon from the legal standpoint.

The evaluation of faculty performance

Workload

Increasingly legislators are asserting that faculty workload must increase. Obviously, whatever professors do could easily be doubled, so board members feel. With such feelings in the air it is important to show that such a solution is all but impossible. Studies at a variety of institutions, recent as well as dated ones, show that faculty work on an average of 57 hours a week (McElhaney, 1959; Stecklein, 1961; French *et al.*, 1965; AAUP, 1970). Thus, the only realistic alternative regarding workload is a reallocation in the amount of energy given to the different tasks faculty now perform. It simply is not feasible for total output to be increased.

Workload studies have a long history. Knowles and White (1939) go back to 1925 and demonstrate that time allotments for faculty activities in diverse disciplines differ significantly. They found the number of hours required to prepare for a class varies greatly from English to mathematics. Establishing equivalences perplexes those who wish to properly adjust for a wide assortment of factors: undergraduate instruction versus supervision of doctoral dissertations, the weight committee assignments should have, directing a play versus teaching economics, and others.

Nonetheless, the classic works of Bunnell (1960), Stecklein (1961), and Sexon (1967) are good places to begin. Specific workloads of faculty at universities can be consulted. For example, one at Ohio State (Inter-University Council, 1970) and one at Michigan (Mueller, 1965) are in accord with those cited above by Eckert and Stecklein (1961) at Minnesota. More recently, workload studies at junior/community colleges have become available (Kilpatrick, 1969; NEA, 1970).

Promotion and Evaluation

Before examining the research conducted on those activities that most generally affect promotion and that are most often assessed by those in charge of that process (research and/or contribution to the college and teaching), a few studies substantiate the concern faculty have about

this most important process in their lives. What disturbs professors most about administrative practice is the uncertainty and ambiguity with which their contributions are judged. Faculty do not think that department chairmen and deans are using the proper criteria. Professors also do not think they have adequate evidence in hand, whatever the criteria. Furthermore, academic men have serious reservations about whether their judges are capable of making the necessary discriminations. It is safe to say that no other process riles faculty quite as much as the evaluation of their performance (Guthrie, 1949; Theopolis, 1967).

Moreover, the faculty concern in this matter is not without foundation. For example, Hussain and Leestamper (1968) discovered the criteria used for judging teaching effectiveness by students and administrators were not the ones given most importance by faculty. In fact, those that faculty thought most important were not even on the list. In a study by Crawford and Bradshaw (1968) each of ten subgroups—assistant professors and instructors, associate and full professors, department chairmen, deans, and six student groups divided by sex and three levels of ability—differed in a statistically significant way from all others in the rating they gave regarding the most important characteristics of effective university teaching. Clark and Blackburn (1971) have found that there are great discrepancies between administrators, faculty, students, and the individual faculty member's self-assessment of how effective he is as a teacher and the kind of contribution he makes to the college. They found that the individual professor's judgments of his own worth disagrees almost completely with those of each of the other groups; that is, the correlations are essentially zero. Luthans' study (1967) revealed that while deans and department chairmen and other administrators believe that teaching is the most important function for faculty—and faculty agree—administrators confess that promotion is judged on other criteria, i.e., research. However, Luthans finds that there is no correlation between the phenomena of research and promotion.

Hoyt (1970) found no significant relationships between either rate of promotion or merit raises with either teaching effectiveness or publication record. He did find differences between disciplines and a slight indication that above average raises are more closely related to teaching effectiveness at an early stage of a man's career and to publications later in his career. Birnbaum (1966) found inconsistencies in faculty evaluation at the community college level. Hollinshead (1940) likewise found factors of inbreeding and movement towards administrative positions to be factors that produced quite uneven promotion rates in a large university. While his study is dated and about a single institution, the variables he examined may still hold in other locations and certainly need to be taken into consideration when this important process is given the treatment it deserves. So confusion reigns. Faculty justifiably complain. This area of faculty evaluation needs serious study and merits high priority.

To begin with, some general works introduce the reader into the phenomena of evaluating faculty performance. Newburn (1959), Gustad (1961), Leigh (1969), and Robinson (1970) provide a good foundation for 4-year institutions. A similar service is provided the 2-year institution by Cohen and Brawer (1969), a report by NFA (1970), and by Highland Community College (1970).

We now turn to more specific studies of measuring faculty performance.

- Research and Contribution to the College - For those concerned with increasing productivity and satisfying the wishes of faculty participants, general studies speak to the research environment and factors effecting production. Pelz (1967) was cited above. Marris (1951) found the phenomena complex and had to take into account variables such as size, funds available for support, time spent on administration, and others. Lehman (1953) has demonstrated that the age of maximum achievement differs by disciplines, a factor that should not be ignored for those staffing a research unit. Other variables related to creative productivity are collaboration, prestige, and expected life styles. For example, Zuckerman (1967) found that the Nobel Laureates' life is greatly changed when fame comes. Productivity goes down and collaborations terminate—not outcomes the recipients desire.

Most studies focus on productivity within special fields. For example, Axelson (1959) looked at PhD productivity in sociology in terms of the time lapse from date of degree. Babchuck and Bates (1962) found that different subgroups of sociologists produced less than others. For example, those who are ordained or females publish considerably less. Crane (1964, 1965) examined prestige situs and productivity. It makes more of a difference where the scientist is working than what his background is in terms of predicting how much he will publish. At the same time, those who have graduated from the most prestigious institutions have the most likelihood of teaching at comparable universities. Thus, there is a double selection factor that must be taken into account.

- Pedagogy - To begin with, McKeachie (1970) should be consulted for the systematic assessment of research on college teaching and student learning. Astin and Lee (1966) and Kent (1966, 1967) have shown that student evaluation of faculty remains a rare phenomenon. Comparatively few institutions engage in it. Gustad's national survey (1967) reveals what sources are used in judging a professor's pedagogy. Nonetheless, the process of student assessment has been in practice for a long time at some institutions. Furthermore, student evaluation of teaching effectiveness has been studied in more detail than probably any other process of evaluation of faculty performance. Most reports of student desires of faculty behavior can be found in Feldman and Newcomb (1968). A few specific studies tell what most of us know, but are important because they verify folklore. For example, Voeks (1954) demonstrates the faculty who ridicule or denigrate students will end up at the bottom of the list. At the same time, Isaacson *et al*

(1964) found that skill, overload, structure, feedback, group interactions, and student-teacher rapport are important factors, but that there is no single, independent measure of good and effective teaching.

Recently, several studies have attempted to evaluate effective university teaching. These studies span all kinds of institutions. The reader must select those closest to his own. Apt (1966), Finn (1969), Hoyt (1969), Hildebrand and Wilson (1970), Meredith (1969), Walker (1968), and Rees (1969) give distinctive contributions. For example, the last mentioned (Rees, 1969) has introduced the semantic differential. Thus faculty personality measures are entering the field of inquiry. Perhaps such variables will unlock the up-to-now low order relationships existing between teacher behavior and student learning. Earlier Yourglich (1955) looked at ideal teacher traits as viewed by faculty and students.

Since faculty do have concerns about the assessment of their work, and particularly about their teaching performance, it is not surprising that many express serious reservations about the qualifications of students to judge their performance in the classroom (e.g., Bryant, 1967). Hence, it is extremely important to pay attention to the studies that have examined some of the questions faculty raise when their future is put in the hands of student evaluators. Unfortunately these studies are not unequivocal and suffer from the temptation to apply the findings to all situations. Nonetheless, they form the foundation upon which current judgments must be made. Furthermore, some inferences warrant support, proper cautions having been taken. They also suggest what research must be undertaken next.

The first questions, then, address themselves to the kinds of measures employed to assess teaching effectiveness, the reliability and validity of these measures, and the variables related to evaluation outcomes.

Setting aside reports on what good teaching supposedly should be, an examination of the studies with empirical evidence shows the overwhelming majority utilize student rating of courses and/or instructors as a measure. That is, student judgment of the class, the course, and the teacher form the basis for assessment. Only four studies (Guthrie, 1949; Maslow and Zimmerman, 1956; Isaacson, *et al.*, 1964; Clark and Blackburn, 1971) utilize faculty colleagues as a criterion. One study employs administrators (Clark and Blackburn, 1971). That same study is the only one in which self-ratings are introduced. Only a single group of studies uses student assessment of the attainment of course objectives as a measure of teaching effectiveness (Hoyt; I, 1969a; II, 1969b; and 1970). Therefore, much of what follows is contingent upon the appropriateness of student judgment about faculty as pedagogues.

To begin with, the typical measures of split-half reliability consistently show that the instruments employed in student ratings have a high reliability. They have been checked and rechecked in different studies. Beginning with

Shock, Kelly and Remmers, (1927) on through to Clark and Blackburn (1971) correlations of 0.9 and higher are common. Furthermore, from the variety of instruments that exist for having students rate courses, the inter-correlations between instruments is also 0.9 and higher (Sherman, 1969). Furthermore, student ratings seem to be quite stable over both short and long periods of time. Bryan (1966) acquired ratings of the same teachers by current students and by alumni and found high correlations.

An understandable and persistent concern of several studies has been the attempt to answer the accusation that student rating is affected by the grade the student receives, one dimension of the so-called "halo" effect. The hypothesis is that those who receive higher grades will assign a higher rating to the course and to the instructor than those doing poorly, thereby calling into question the objectivity of the rater.

With respect to actual grades received in the course, three studies have found a small positive relationship. Elliott (1950), Weaver (1960), and Garber (1965) acquired such outcomes. Cohen and Berger (1970) found a small order correlation between test achievement and perceived organization of the course (mas $r=.31$). They did not, however, relate this outcome to the rating of the course.

More studies have failed to find any relationship between grade received and student ratings of courses and instructors. This has been true over some period of time now. Remmers (1930), Elliott (1949), Voeks and French (1960), working with data from the 1950's, Garvernick and Carter (1962), Caffrey (1969), and Rubenstein and Mitchell (1970) have all found that grades received were independent of instructor ratings. In fact, the studies by Gavernick and Carter, the one by Elliott, and the one by Voeks and French also find that course and instructor ratings are independent of expected grade. They also found that when an instructor's grading standard changed appreciably, his ratings did not.

While Lathrup (1968) found in a state college that there was a significantly high correlation ($r=.6$) between a student's *perceived* learning and his rating of a course, the relationship is not altered by the grade he receives. On the other hand, Steward and Malpass (1966) obtained significant correlations between expected grade and course rating. However, they did not measure the relationship of received grade to either factor.

Voeks and French (1960) found no statistically significant interdepartmental correlations. They likewise found no difference between upper and lower division courses in the effect on student ratings. Neither did Brewer and Brewer (1970). The expressed concern that required lower division courses would be scored adversely as compared to elective advanced courses is proved otherwise.

In sum, the evidence is predominately on the side of showing that student performance in the course is essentially unrelated to the way in which they judge it. If it has an effect, it is an extremely small one and probably can be

ignored. Certainly in making comparative studies, the amount of variance allotted to it is insignificant.

Three studies have looked at what effects knowledge about evaluating faculty members will have either on student evaluation or faculty behavior and their relationship to rating of the course. A study at Freed-Hardeman College (n.d.) found that freshmen did not change their ratings of teachers even when given instructions about the process of rating teachers and when informed that this would be one of their roles. McNeil (1967) found that student learning increased when the professor knows he will be evaluated on how much the student gains. However, the judgments about him remain the same. Murdock (1969) discovered that if a teacher knows he will be rated by students, his ratings by students improve. However, there was no effect on how much the student learns. (What is not known is what level his ratings may reach, and whether or not the faculty member will keep on a higher plane once the rating has been achieved.) These studies seem to indicate that while consciousness of rating has some effect on performance, it is not related to judgment about the course and its outcomes.

Two studies have dealt with interaction effects between student and faculty member. Menges (1969) found that in large lectures in a university the cognitive compatibility between the student and the instructor does not affect student achievement, although where the fit is good, the student's attitude toward the course and the instructor is higher. Hall (1970) found in a university setting of small classes that teacher style, not a fit between teacher and student style, is related to learning. The findings here do indicate some factors that can determine outcomes. It is not clear how these affect course ratings as yet. More studies are needed in this area.

When "psychological" factors enter, the independence of behavior and student ratings becomes much more complex. Lewis (1964) found no relationship. However, Cohen and Berger (1970) did find a significant correlation between test achievement and student interest ($r = .39$) and between test achievement and student-faculty interaction ($r = .37$). Treffinger and Feldhusen (1970) obtained a significant correlation of .41 between the students pre-course and final course rating. Thus a kind of psychological halo appears when satisfaction is that highly related to expectation. Domino (1970) found interactive effects between students and faculty where both were high on achievement orientation versus those where both were low. However, while these differences are significant, they were found by taking population extremes. What is not known is whether this truth holds over the entire range of the variable. Singer (1964) obtained a high relationship between one subgroup of male students and the high score they achieved by ability to use manipulative strategies to achieve grades and the grades they received. At the same time, he found that faculty were essentially unbiased when it came to the attractiveness of the individuals they graded.

On the other side, some lack of independence does come from studies involving psychological variables. For example, Singer (1964) found the trait of Machiavellianism unevenly distributed; furthermore, faculty seem to possess it even more than students. In another study, Mahey (1959) discovered that students who are high on authoritarianism like faculty who are high on authoritarianism. Furthermore, students who are high on an authoritarian scale are more likely to rate all teachers higher than those students who are not authoritarians. The consequence of this is that nonauthoritarian faculty receive somewhat lower ratings than those who are more dominant in the classroom. Caffrey (1969) found sex and personal qualities of faculty were not factors that prompted a bias response. Snibbe (1970) saw little relationship between personality traits of professors and grading behaviors; however, "liberal" professors did grade more generously than those who were more "conservative." Isaacson, McKeachie, and Milholland (1963) have discovered that the factor of general cultural attainment correlates highest with the ratings of one another by teaching fellows when judging the effectiveness of their teaching ability. This factor correlates between .48 and .67 at the University of Michigan, and .48 at Ohio State.

In the main, and using a variety of psychological measures, factors concerning faculty grading and student happiness with the course seem to be independent of how students judge a course or the instructor.

There are other factors that do make a difference. In a pilot investigation, Gates and Burnett (1969) uncovered appreciable difference over what factors are most important for graduate students assessing courses compared to undergraduates. (All the remarks made previously refer to studies on undergraduate instruction.) Of the factors that matter, the researcher must consider academic discipline (Rayder, 1968). In a junior/community college setting Walker (1969) found an assortment of unconnected factors of some importance. Also, studies consistently show that the more experienced faculty of higher rank are judged better teachers than are their younger and less experienced counterparts. (Remmers, 1963, McGrath, 1962, and Langer, 1966). Yonge and Sassenrath (1968) found OPI (Omnibus Personality Inventory) characteristics of faculty and students do differ, and distinguish between instructors; however, nothing was shown to indicate course ratings were distorted. Deshpande, Webb, and Marks (1970) discovered in engineering students that interaction is not important, but structure is.

The best validity studies come from Feldhusen (1967), Hoyt (1969a, 1969b, 1970) and Clark and Blackburn (1971). Clark and Blackburn used peer rating while the other two studies used self-measures and achievement of course goals. All gave thorough statistical analyses to show that judgment was independent of other factors. McKeachie and Solomon (1958) used future registration as a measure, but had limited success.

In all, student evaluations can be used, but with reservations.

• The Relationship between Teaching and Research.—The debates on whether faculty engaged in scholarship have their teaching deteriorate from neglect or whether a professor could possibly be a good teacher if he were not engaged in scholarly work are as spirited today as they were when raised at the turn of the century. Recently, a number of studies have been conducted on this question and are important for faculty evaluators. If there were a firm relationship one way or the other, then teaching could be judged with more confidence. Even if pedagogical effectiveness escapes reliable and valid measurement, presumably it is possible to make an objective evaluation of scholarly productivity.

At Brooklyn College in the 1940's, Maslow and Zimmerman (1956) obtained a high correlation between student and faculty ratings of teachers ($r = .69$). They also learned that peers judge their fellow faculty member as being a good teacher when they believe him to be creative ($r = .77$). The correlation between student judgment of attractive personality and teaching effectiveness was likewise positive. Lacking is an independent measure of faculty creativity and a correlation measure of student judgment of teaching.

At the University of Washington, Voeks (1962) found that publishing and effective teaching neither go hand in hand nor do they conflict. In an unpublished paper of preliminary findings at Purdue University, Feldhusen (1969) found eight correlations that fluctuated almost exactly around zero between different statements about teaching effectiveness and faculty production. Even more recently at Kansas State University, Hoyt (1970) found no significant correlations between faculty publications and teaching effectiveness.

However, other recent investigations produce non-corroborating outcomes. At Tufts University, Bresler (1968) discovered a small positive relationship between student judgment of teaching effectiveness and the professor's possession of a research grant. Stallings and Singhal (1969) obtained small but significant correlations (r approximately .25) between productivity as measured by published articles and student ratings of teacher effectiveness at the University of Illinois. While the positive relationship was true for all ranks, the higher ranked professors also had higher productivity and higher student ratings. In a second study done at Purdue University, McDaniel and Feldhusen (1970) did find a positive relationship between faculty ratings and indices of scholarship when scholarship is measured in a somewhat indirect way (being second author in a major publication). Their other measures of productivity correlated close to zero with their ratings as teachers.

In balance, the relationship between scholarship and pedagogy is weak. True, the correlations are never significantly negative. In fact, more do not differ from zero than

do. And of those that are positive, the variance accounted for never exceeds 15 percent, a very small amount.

So the problem persists. Faculty think they are promoted on their publication record, and deans regretfully agree; however, they are not (Luthans, 1967). But then ignorance is not really bliss when uncertainty creates discontent. Faculty do want to be judged on the basis of their merits.

Perhaps the answers reside elsewhere. For example, Babchuch and Bates (1962) verified that some faculty produce a great deal more than others. There are producers and nonproducers on a faculty, and the phenomenon is not normally distributed. Moreover, they did not correlate productivity with teaching effectiveness. In pilot investigations at the University of Wisconsin and at Stanford, Hammond, Meyer, and Miller (1969) found students and faculty disagree about teaching effectiveness and its relationship to research. They speculate the reason the correlations may hover around zero is due to the fact that faculty judge a colleague to be a good teacher if and only if he is doing research. But students believe that the teacher who is poor in the classroom is so because he is spending all of his time on research. Thus faculty and student interpretations of the performance of a professor are done on perpendicular axes. Their untested hypothesis could account for the low relationships most have found. None of the research, however, accounts for why the individual faculty member is such an extraordinarily poor judge of how good a teacher he is when self-ratings are compared to those of his colleagues, students, and administrators.

Clearly this area presents a rich field for research. Not only will evidence aid in clarifying the relationship between faculty roles; it will also alleviate much faculty uncertainty by replacing myths with empirical facts.

Faculty Satisfaction and Dissatisfaction

Also important when evaluating faculty performance are those factors that affect morale. Russell (1962) enumerated conditions affecting faculty satisfactions and dissatisfactions. Two dissertations, one by Field (1965) and one by Heding (1968), also delineated concerns about satisfaction at two large universities. When Ferguson (1961) and Theophilus (1967) also investigated this phenomena, they found low order relationships between teaching loads, facilities, library holdings, research support, and other factors with respect to faculty satisfaction and dissatisfaction. Ezechman (1968) in liberal arts colleges and Hill (1968) in a university setting discovered small order relationships between faculty satisfaction and administrative leadership.

Several studies have examined faculty satisfactions in the community/junior college area. Richardson (1962) developed a morale scale that has been used by others. Hansen (1964), Mills (1968), and Roark (1968) completed dissertations in the community/junior college area addressed to faculty happiness and unhappiness. Contrary to con-

ventional wisdom, faculty happiness or unhappiness did not correlate with performance. This is not to say that dissatisfactions and their causes should be ignored; rather it simply indicates that those who reward faculty cannot use morale as an effective measure of job performance.

Finally, only one study examines stress and its effects on faculty performance. This was conducted at a liberal arts college by Clark (1971). If her findings can be applied generally, they would have a significant impact. Clark clearly shows that when qualitative and quantitative overload increase—inevitable events in the next few years—faculty with personality characteristics that make them less flexible, or who have low self-esteem, and those who have more anxieties experience a drop in performance as measured by both colleagues and students with respect to contributions to the college and effectiveness in the classroom. Obviously, more studies of this kind are needed. It is not just simply a manner of satisfaction or dissatisfaction that is affected by organizational and working conditions, important as they may be. Stress and overload seem to have very real consequences for performance on the job. Certainly such factors must be taken into consideration when evaluating faculty and when rewards are distributed.

Student-Faculty interaction

More studies have been conducted on students viewing and expressing reactions about faculty than vice versa. Fernandes (1964) cites the characteristics faculty desire in beginning students at a large university. That faculty desire students who are curious, perform well, and have considerable intellectual ability provide no surprises. From the other point of view, Lehmann (1966) and Lewis (1968) considered student perceptions and images of professors. Generally speaking, faculty are accorded a high status and are viewed as possessing traits most professors would themselves find admirable—intellectual, happy, socially concerned. Students view faculty conducting research as admirable and believe it improves their teaching (Blank, 1962). Students are sensitive to faculty personal and social problems, and apparently find few difficulties in adjusting to them (Clark and Murray, 1962).

Three dissertations address themselves to similarities and differences in expectations faculty and students have of one another: Dick (1957) examined problems of personality conflicts; Lacognata (1962) investigated role expectations in a university setting; and Twa (1970) conducted a similar study in the community colleges. Congruence of expectations is generally high, although there are noted exceptions.

The professor serves as a role model (Adelson, 1962) for some students and appears to be instrumental in influencing a student's decision to undertake an academic career (Andringa, 1967). The dissimilarities between faculty in

various disciplines is also related to significant differences affecting student aspirations in different fields of study (Thistlethwaite and Wheeler, 1966). Gamson (1967) found that the relationship of students with the social science faculty was much more on a person-to-person basis than it was with the natural science faculty. The former are more concerned with the entire life style of the student, while the latter restricted their attention to the student's mind. On the other hand, in a controlled study, Lohman (1969) found that a faculty member was unable to influence the student trait of "capacity to value."

It has long been common knowledge that students become experts in working their way through the system. More recently, Becker, Geer, and Hughes (1968) have demonstrated the type of relationship that develops between student and professor when students try to earn high grades. That faculty respond to student performance in their grading practice by changing their standards when expectations they hold are not met was uncovered by Riesman, Gusfield, and Gamson (1970). While students complain they are at the mercy of faculty whims, the opposite seems true. Faculty are sensitive and respond to student performance, reluctantly or otherwise.

Four dissertations focus on student-faculty interactions in large universities and generally have found no clear patterns. Sometimes there appear to be discipline differences (Kratwohl, 1961). Meyer (1965) discovered interaction of student and professor to be less than either desired and the relationships less than satisfactory. Goldberg (1966) found two institutional differences between two graduate sociology departments. Oppelt (1967) found differences between "vocational" and "academic" faculty in community/junior colleges.

The extent of student-faculty communication outside the classroom seems quite small (Dilley, 1967). It looks as if in Dilley's large university setting only a few faculty were involved with students. Most were not. Another study in another large university setting corroborates Dilley's view. However, "faulting" the professor would be an error. Most students do not desire a close relationship with a faculty member. They neither expected one nor wished it. The findings of Chickering and Blackburn (1971) show that lack of interaction is not peculiar to the university; they found the same result to be true in small liberal arts colleges. Student-faculty interaction is not a matter of great moment for most students and most faculty.

When faculty views of student decisionmaking are solicited and faculty attitudes about various kinds of student behavior are sought, a clear pattern emerges. In general, faculty state that students may have large choices in those things that affect student living—residence halls, student government, and the like. They are willing to have students in advisory roles in curricular matters. But as for participation in faculty selection, promotions and the like, most faculty exclude students.

Milton (1968), Wilson and Gaff (1969), and Gaff (1970) have conducted studies of student-faculty interaction from the faculty viewpoint. In a similar way, Abramson and Weaces (1970) and Gold (1969) find faculty show great concern when there are disruptions on campus.

Finally, Blackburn and Lindquist (1971) found that faculty will state in a public way, that is, with students present, that student participation in decisionmaking is

desirable. However, when given a private and closed vote, faculty exclude students from those affairs that heretofore have been almost exclusively in the faculty domain.

More studies are needed to examine in what behavioral way student activities affect faculty performance. The notion that faculty are immune to student pressures and that their work performance is unaffected by student sanctions and accolades is at best folklore.

REFERENCES

1. Abramson, Harold J. and Rosalio Weaces, "Campus Dissent and Academic Punishment: The Response of College Professors to Local Political Activism," *Abstracts of Annual Meeting*, American Sociological Association, 1970.
2. Adelson, J., "The Teacher as a Model." In *The American College: A Psychological and Social Interpretation of the Higher Learning*. Edited by N. Sanford. New York: Wiley, 1962. pp. 396-417.
3. American Association for Higher Education, *College and University Bulletin*, May 15, 1970
4. American Association of University Professors, "The Michigan AAUP Letter," December, 1970.
5. American Association of School Administrators, *The School Administrator and Negotiation*. Washington, D.C.: American Association of School Administrators, 1968.
6. Anantaraman, Venkatraman, "Mobility of Professional Economists in the United States," Industrial Relations Research Center, The University of Wisconsin, Madison, 1961. (Abridged, xerox copy.)
7. Andringa, Robert C., "Superior Students' Perceptions of College Teaching as a Career." Unpublished dissertation, Michigan State University, 1967.
8. Apt, Madeline H., "A Measurement of College Instructor Behavior." Unpublished Ph.D. dissertation, University of Pittsburgh, 1966.
9. Astin, Alexander and Calbin B.T. Lee, "Current Practices in the Evaluation and Training of College Teachers," *Educational Record*, Summer 1966, pp. 361-375.
10. Aurand, Charles H., "A Preliminary Study of Job Mobility of Music Faculty from National Association of Schools of Music Institutions." Ph.D. dissertation in progress, The University of Michigan, 1971.
11. Axelson, Leland J., "Differences in Productivity of Doctorates in Sociology." *Journal of Educational Sociology*, October 1959, pp. 49-55.
12. Babchuk, Nicholas and Alan P. Bates, "Professor or Producer: The Two Faces of Academic Man," *Social Forces*, May 1962, pp. 341-348.
13. Bachman, Jerald G., "Faculty Satisfaction and the Dean's Influence: An Organizational Study of Twelve Liberal Arts Colleges," *Journal of Applied Psychology*, Vol. 52, No. 1, 1968, pp. 55-61.
14. Balyeat, Ralph E., "Factors Affecting The Acquisition and Retention of College Faculty," University of Georgia, Athens, December 1968 (ED 029 617).
15. Becker, Howard S., Blanche Geer, and Everett Hughes, *Making The Grade: The Academic Side of College Life*. New York: John Wiley, 1968.
16. Bennis, Warren, "Arribismo," *The Research Reporter*, The Center for Research and Development in Higher Education, University of California (Berkeley), Vol. 5, No. 3, 1970.
17. Berelson, Bernard, *Graduate Education in the United States*. New York: McGraw Hill, 1960.
18. Bierstedt, Bernard and Fritz Machlup, "Representation of Economic Interests," *AAUP Bulletin*, Summer 1966, pp. 229-234.
19. Birnbaum, Robert, "Background and Evaluation of Faculty in New York: A Survey of Twenty-Seven Colleges Indicates Some Inconsistencies in Faculty Evaluation," *Junior College Journal*, November 1966, pp. 34-37.
20. Blackburn, Robert T., "Changes in Faculty Life Styles," *Research Report Number 1*, American Association for Higher Education, Washington, D.C., November, 1970.
21. Blackburn, Robert T. and John D. Lindquist, "Faculty Behavior in the Legislative Process: Professorial Attitudes versus Behavior Concerning the Inclusion of Students in Academic Decision-Making." Chapter in a forthcoming book, Byron G. Massialas, Editor, and in *Sociology of Education*, Summer 1971.
22. Blank, Blanche, "Student Opinion About Faculty Research," *School and Society*, March 24, 1962, pp. 146-147.
23. Brawer, Florence B., *Personality Characteristics of College and University Faculty: Implications for the Community College*. Washington, D.C.: American Association of Junior Colleges, 1968.
24. Bresler, Jack B., "Teaching Effectiveness and Government Awards," *Science*, 12 April, 1968, pp. 164-167.
25. Brewer, Robert E. and Marilyn B. Brewer, "Relative Importance of Ten Qualities for College Teaching Determined by Pair Comparisons," *Journal of Educational Research*, Vol. 63, 1970, pp. 243-246.
26. Brown, David G., *The Market for College Teachers: An Economic Analysis of Career Patterns among Southeastern Social Scientists*. Chapel Hill, N.C.: University of North Carolina Press, 1965.
27. Brown, David G. and Jay L. Tontz, "The Mobility of Academic Scientists," A Report to the National Science Foundation, Washington, D.C., April 1966.
28. Brown, David G., *The Mobile Professor*. Washington, D.C.: American Council on Education, 1967.
29. Bryant, R.C., "Teacher's Image is Stubbornly Stable," *Clearinghouse*, Vol. 40, 1966, pp. 459-461.
30. Bryant, Paul T., "By Their Fruits Ye Shall Know Them," *Journal of Higher Education*, June 1967, pp. 326-330.
31. Bunnell, Kevin, *Faculty Work Load*. Washington, D.C.: American Council on Education, 1960.
32. Bylsma, Donald, Jr., "Changes in Organizational Structure of Selected Public Community Colleges in Michigan Since 1965." Unpublished Ph.D. dissertation, The University of Michigan, 1969.
33. Caffrey, Bernard, "Lack of Bias in Student Evaluations of Teachers," *Proceedings*, 77th Annual, American Psychological Association, Vol. 4, Part 2, 1969, pp. 641-642.
34. Carlton, Patrick W. and Harold I. Goodwin, *The Collective Dilemma: Negotiations in Education*. Worthington, Ohio: C.A. Jones Publishing Co., 1969.
35. Cartter, Allan M., "A New Look at the Supply of College Teachers," *Educational Record*, Summer 1965, pp. 259-266.
36. Cartter, Allan, "College Teachers: Quantity and Quality." Chapter in *Improving College Teaching*, Calvin Lee (ed.), American Council on Education, Washington, D.C., 1967, pp. 114-145.

37. Cartter, Allan, "The After Effects of Putting the Blind Eye to the Telescope." Paper presented at the 25th National Conference on Higher Education, Chicago, Ill., 3 March, 1970a.
38. Cartter, Allan, "After Effects of Blind Eye to Telescope," *Educational Record*, Fall 1970b, pp. 333-338.
39. Cartter, Allan M., "The Ph.D. Surplus, a Deepening Crisis for Scientific Manpower." Paper delivered at the AAAS Meeting, Chicago, Illinois, 27 December, 1970c.
40. Cartter, Allan, "Graduate Education in a Decade of Radical Change," *The Research Reporter*, The Center for Research and Development in Higher Education, University of California (Berkeley), Vol. 6, No. 1, 1971a, pp. 5-6.
41. Cartter, Allan M., "Scientific Manpower for 1970-1985," *Science*, Vol. 172, 9 April 1971b, pp. 132-140.
42. Chickering, Arthur and Robert T. Blackburn, *The Undergraduate*. (Forthcoming book.)
43. Clark, Edward T. and Rev. John B. Murray, "Student Perceptions of Adjustment of Priest and Lay Professors." *Catholic Educational Review*, September, 1962, pp. 386-391.
44. Clark, Mary Jo and Robert T. Blackburn, "Assessment of Faculty Performance: Some Correlates Between Self, Colleagues, Students, and Administrators." (Submitted for publication.)
45. Clark, Mary Jo, "A Study of Organizational Stress and Professional Performance of Faculty Members in a Small Four-Year College." Ph.D. dissertation in progress, The University of Michigan.
46. Cohen, Arthur M. and Florence B. Brawer, *Measuring Faculty Performance*. Washington, D.C.: American Association of Junior Colleges, ERIC Clearinghouse for Junior Colleges, 1969.
47. Cohen, Stanley H. and Wallace G. Berger, "Dimensions of Students' Ratings of College Instructors Underlying Subsequent Achievement on Course Examinations." *Proceedings*, 78th Annual Convention, APA, 1970, pp. 605-606.
48. Crane, Diana Marilyn, "The Environment of Discovery: A Study of Academic Research Interests and Their Setting." Unpublished Ph.D. dissertation, Columbia University, 1964.
49. Crane, Diana Marilyn, "Scientists at Major and Minor Universities: A Study of Productivity and Recognition," *American Sociological Review*, October 1965, pp. 699-714.
50. Crane, Diana, "The Academic Marketplace Revisited: A Study of Faculty Mobility Using the Cartter Ratings," *American Journal of Sociology*, May 1970, pp. 953-964.
51. Crawford, P.L. and H.L. Bradshaw, "Perception of Characteristics of Effective University Teachers: A Scaling Analysis," *Educational and Psychological Measurement*, Winter 1968, pp. 1079-1085.
52. Creal, Richard C., "A Study of the Factors Which Influence the Course of Collective Negotiation Toward Resolution or Impasse in Selected Community Colleges." Unpublished Ph.D. dissertation, The University of Michigan, 1969.
53. Davis, Bertram H., "Union and Higher Education: Another View," *Education Record*, Spring 1968, pp. 139-144.
54. Davis, Richard H., "Personnel and Organizational Variables Related to the Adoption of Educational Innovations in a Liberal Arts College." Unpublished Ph.D. dissertation, University of Chicago, 1965.
55. Day, James F. and William H. Fisher, "The Professor and Collective Negotiations," *School and Society*, April, 1967, pp. 226-229.
56. DeJesus, Alicia T., "Factors Associated with the Attraction and Retention of Qualified College Faculty at Indiana University." Unpublished Ed.D. dissertation, Indiana University, 1965.
57. Deshpands, Anant S., Sam C. Webb, and Edmond Marks, "Student Perceptions of Engineering Instructor Behaviors and Their Relationships to the Evaluation of Instructors and Courses," *American Educational Research Journal*, May 1970, pp. 289-305.
58. Dick, Harry Richard, "Relationship of Conflicting Role Expectations of College Freshmen and Faculty Members to Some Aspects of Personal Disorganization of Freshmen Students." Unpublished Ph.D. dissertation, State College of Washington, 1957.
59. Dilley, J.S., "Student-Faculty Non-communication," *Journal of College Student Personnel*, September 1967, pp. 282-285.
60. Domino, George, "Interactive Effects of Achievement Orientation and Teaching Style on Academic Achievement," *ACT Research Report*, No. 39, Iowa City, Iowa, December, 1970.
61. Dressel, Paul L. and Frances H. DeLisle, *Undergraduate Curriculum Trends*. Washington, D.C.: American Council on Education, 1969.
62. Dykes, Archie R., *Faculty Participation in Academic Decision Making*. Washington, D.C.: American Council on Education, 1968.
63. Eckert, Ruth E. and John E. Stecklein, *Job Motivations and Attractions of College Teachers*. Washington, D.C.: United States Government Printing Office, 1961.
64. Elam, Stanley M., Myron Lieberman, and Michael H. Moskow, *Readings of Collective Negotiations in Public Education*. Chicago: Rand McNally, 1967.
65. Elliott, D.N., "Characteristics and Relationships of Various Criteria of Teaching." Unpublished doctoral dissertation, Purdue University, 1949.
66. Elliott, D.N., "Characteristics and Relationships of Various Criteria of College and University Teachings," *Purdue University Studies in Higher Education*, No. 70, 1950, pp. 5-61.
67. ERIC, "ERIC Abstracts: A collection of ERIC Document Resumes on Collective Negotiations in Education." ERIC Abstracts Series Number One, American Association of School Administrators, Washington, D.C.: Oregon University, Eugene, August 1969.
68. Evans, Richard I., *Resistance to Innovation in Higher Education*. San Francisco: Jossey-Bass, 1968.
69. Farris, Theodore N., "The Academic Marketplace Revisited: Faculty Mobility in Publicly Supported Two-Year Colleges in Greater New York Metropolitan Fund." School of General Studies, Columbia University, New York, N.Y., 1968.
70. Farris, Theodore N., "The Academic Marketplace in Community Colleges in New York." ERIC, 1970.
71. Feldhusen, John F. and Ernest D. McDaniel, "Unpublished Internal Study on Teaching Effectiveness," Purdue Educational Research Center (mimeo), 1967.
72. Feldman, Kenneth A. and Theodore M. Newcomb, *The Impact of College on Students*. Two Volumes. San Francisco: Jossey-Bass, 1969.
73. Ferguson, John B., "Job Satisfaction and Job Performance Within a University Faculty." Unpublished Ph.D. dissertation, Cornell University, 1961.
74. Fernandes, Hermano J. X., "Desirable Characteristics of Freshmen as seen by the Faculty in the various Units of The University of Michigan," Unpublished Ph.D. dissertation, The University of Michigan, 1964.
75. Ferriss, Abbott L., "Deterioration of Teaching," *Science*, Vol. 168, 12 July, 1970, p. 1286.
76. Field, George Reed, "Satisfaction and Dissatisfaction of University of Wisconsin Faculty Members By Campus Location." Unpublished Ph.D. dissertation, University of Wisconsin, 1965.
77. Fincher, Arvel Lawrence, "Job Mobility of Academic Physicists in American Higher Education: A Preliminary Study." Unpublished Ph.D. dissertation, University of Michigan, 1969.
78. Finn, Stanley R. (Ed.), "Characteristics of the Effective College Teacher," *Higher Education Research Abstracts No. 8*.

- Hofstra University, Hempstead, New York, Center for the Study of Higher Education, September 1969 (ED 032 841).
79. Frankie, R.J. and Ray A. Howe, "Faculty Power in the Community College," *Theory Into Practice*, April 1968, pp. 83-88.
 80. Freed-Hardeman College, "Attitude Change of Freshman College Students Toward their Role as Raters of Teacher Behavior. Final Report," Freed-Hardeman College, Henderson, Tennessee, n.d. (ED 043 313).
 81. French, John R.P., Jr., C. John Tupper, and Ernst F. Mueller, *Work Load of University Professors*. Cooperative Research Project No. 2171, Office of Education, HEW. Ann Arbor, Michigan: Institute for Social Research, The University of Michigan, 1965.
 82. Gaddy, Dale, "Faculty Recruitment," American Association of Junior Colleges, Washington, D.C.: UCLA, ERIC Clearinghouse for Junior Colleges, September 1969 (ED 032 864).
 83. Gaff, J.G., "Teacher-Student Interaction: The Faculty Viewpoint." In *The Encyclopedia of Education*. Edited by L.C. Deighton. New York: Macmillan, in press.
 84. Gamson, Zelda R., "Performance and Personalism in Student-Faculty Relations," *Sociology of Education*, Fall 1967, pp. 279-301.
 85. Garber, H., "Certain Factors Underlying the Relationship between Course Grades and Student Judgments of College Teachers," Unpublished Ph.D. dissertation, The University of Connecticut, 1965.
 86. Garvernick, C.M. and H.D. Carter, "Instructor Ratings and Expected Grades," *California Journal of Educational Research*, Vol. 13, 1962, pp. 218-221.
 87. Gates, Maxine and Collings W. Burnett, "Students' Perceptions of Professors," *Improving College and University Teaching*, Autumn 1969, pp. 234-236.
 88. Gianopulos, John W., "A Descriptive Analysis of Collective Negotiation Agreements in Ten Selected Illinois and Michigan Public Community Colleges." Unpublished Ph.D. dissertation, Loyola University, 1970a.
 89. Gianopulos, John W., "The College Administrator and Collective Negotiations," *Junior College Journal*, August-September, 1970b, pp. 26-29.
 90. Gillis, John W., "Academic Collective Bargaining," *Liberal Education*, December 1970, pp. 594-604.
 91. Glenny, Lyman, "Doctoral Planning for the 1970s," *The Research Reporter*, The Center for Research and Development in Higher Education, University of California (Berkeley), Vol. 6, No. 1, 1971, pp. 1-5.
 92. Gold, Ben K., "Survey of Faculty Regarding Campus Incidents of March 10-14." Los Angeles City College, California, April 1969 (ED 030 423).
 93. Goldberg, Joseph, "Student-Faculty Interaction: A Study in Role Transaction." Unpublished Ed.D. dissertation, Columbia University, 1966.
 94. Gram, Christine Harris, "Effects of Collective Negotiations on the Wage Structure in Community Colleges in Michigan." Ph.D. dissertation in progress, The University of Michigan.
 95. Gross, Edward and Paul V. Brambsch, *University Goals and Academic Power*. Washington, D.C.: American Council on Education, 1968.
 96. Gustad, John W., *The Career Decisions of College Teachers*. Atlanta, Ga.: Southern Regional Education Board, Monograph No. 2, November 1960.
 97. Gustad, John W., "Policies and Practices in Faculty Evaluation," *Educational Record*, July 1961, pp. 194-211.
 98. Gustad, John W., "Evaluation of Teaching Performance: Issues and Possibilities." In *Improving College Teaching*. Edited by C.B.T. Lee. Washington, D.C.: American Council on Education, 1967, pp. 265-281.
 99. Guthrie, E.R., "The Evaluation of Teaching," *Educational Record*, April 1949, pp. 109-115.
 100. Hall, Douglas T., "The Effect of Teacher-Student Congruence Upon Student Learning in College Classes," *Journal of Educational Psychology*, June 1970, pp. 205-213.
 101. Hammond, Phillip E., John W. Meyer, and David Miller, "Teaching Versus Research: Sources of Misperceptions," *Journal of Higher Education*, December 1969, pp. 682-690.
 102. Hansen, Maris D., "Study of the Relationship Between Faculty Morale and Influence Structure in Five Selected Junior Colleges." Unpublished Ph.D. dissertation, University of Texas, 1964.
 103. Hargens, Lowell L. and Warren O. Hagstrom, "Sponsored and Content Mobility of American Academic Scientists," *Sociology of Education*, Winter 1967, pp. 24-38.
 104. Heding, Howard W., "Elements of Institutional Climate Pertaining to Faculty Morale." Unpublished Ph.D. dissertation, University of Missouri, Columbia, Mo., 1968.
 105. Heim, Peggy, "Growing Tensions in Academic Administration," *North Central Association Quarterly*, Winter 1968, pp. 244-251.
 106. Highland Community College, "Evaluation of Community College Instruction: A Background Study," Highland Community College, Freeport, Illinois, 1970 (ED 039 876).
 107. Hildebrand, Milton and Robert C. Wilson, "Effective University Teaching and Its Evaluation," Center for Research and Development in Higher Education, California University (Berkeley), 1970 (ED 039 860).
 108. Hill, Winston W., "Some Organizational Correlates of Sanctions Perceived by Professors to be Available to their Departmental Chairman." Unpublished Ph.D. dissertation, University of Washington, 1965.
 109. Hollingshead, A.B., "Climbing the Academic Ladder," *American Sociological Review*, June 1940, pp. 384-394.
 110. Howe, Ray A., "Faculty-Administrative Relationships in Extremis," *Junior College Journal*, November 1966, pp. 14-15.
 111. Howe, Ray A., "Collective Bargaining for Teachers," *North Central Association Quarterly*, Winter 1968, pp. 252-255.
 112. Howe, Ray A., "To What Extent Do the Devices, Techniques, and Procedures of Industrial Relations Apply to Higher Education?" Paper presented at the 25th national conference for AAHE, Chicago, Illinois, March 1970 (ED 039 858).
 113. Hoyt, Donald P., "Identifying Effective Teaching Behaviors," Kansas State University, Manhattan, Kansas, December 1969 (ED 039 197).
 114. Hoyt, Donald P., "Instructional Effectiveness: I. Measurement of Effectiveness," Research Report 6, Office of Educational Research, Kansas State University, Manhattan, November 1969a.
 115. Hoyt, Donald P., "Instructional Effectiveness: II. Identifying Effective Classroom Procedures," Research Report 7, Office of Educational Research, Kansas State University, Manhattan, December 1969b.
 116. Hoyt, Donald P., "Instructional Effectiveness: III. Interrelationships with Publication Record and Monetary Reward," Research Report 10, Office of Educational Research, Kansas State University, Manhattan, May 1970.
 117. Hussain, K.R. and Robert Leestamper, "Survey of Criteria of Teaching Effectiveness at New Mexico State University." New Mexico State University, Las Cruces, June 1968 (ED 023 365).
 118. Inter-University Council of Ohio, "Faculty Load Study." (No publishing place: presumably Columbus, Ohio), January 1970.
 119. Isaacson, Robert L., Wilbert J. McKeachie, and John Milholland, "Correlation of Teacher Personality Variables and Student Ratings," *Journal of Educational Psychology*, April 1963, pp. 110-117.

- Isaacson, McKeachie, Milholland, et al, "Dimensions of Student Evaluations of Teaching," *Journal of Educational Psychology*, December 1964, pp. 344-351
121. Kadish, S.H., "Strike and the Professoriate," *AAUP Bulletin*, June 1968, pp. 160-168.
 122. Kelly, M. Frances, "Job-Seeking Strategies of Public Two Year College Faculties in New York State." Office of Institutional Research, State University of New York, Buffalo, N.Y., 1968.
 123. Kent, Laura, "Student Evaluation of Teaching," *Educational Record*, Summer 1966, pp. 376-406.
 124. Kent, Laura, "Student Evaluation of Teaching." In *Improving College Teaching*. Edited by C.B.T. Lee. Washington, D.C., American Council on Education, 1967, pp. 312-343.
 125. Kilpatrick, Eugene Gordon, Jr., "Junior College Faculty Load." Unpublished Ed.D. dissertation, University of California (Los Angeles), 1969.
 126. Klapper, Hope L., "The College Teacher: A Study of Role Performance, Role Preference, and Role Strain," Unpublished Ph.D. dissertation, Columbia University, 1967.
 127. Klapper, Hope L., "The Young College Faculty Member—A New Breed?" *Sociology of Education*, Vol. 42, 1969, pp. 38-49.
 128. Knowles, Asa S. and William C. White, "Educational Research and Statistics: A New Approach to Evaluating Faculty Loads," *School and Society*, May 27, 1939, pp. 682-684.
 129. Koemaker, Robert H., "Status of the Doctor of Arts and Sixth-Year Degree and Non-Degree Programs for Preparing Junior College and College Teachers," March 1970 (ED 040 691).
 130. Krathwohl, Carlton L., "A Study of Student-Instructor Relationship at the College Level." Unpublished Ph.D. dissertation, Syracuse University, 1960.
 131. Kruytbosch, Carlos E. and Sheldon L. Messinger, "Unequal Peers: The Situation of Researchers at Berkeley," *American Behavioral Scientist*, May-June, 1968, pp. 33-43.
 132. Kugler, Israel, "The Union Speaks for Itself," *Educational Record*, Fall 1968, pp. 414-418.
 133. Lacognata, Angelo Anthony, "Role Expectations of University Faculty and Students: A Social Psychological Analysis." Unpublished Ph.D. dissertation, Michigan State University, 1962.
 134. Lane, Robert E., "Faculty Unionism in a California State College—A Comparative Analysis of Union Members and non-Members." Unpublished Ph.D. dissertation, University of Iowa, 1967.
 135. Langen, T.D., "Student Assessment of Teaching Effectiveness," *Improving College and University Teaching*, Vol. 14, 1966, pp. 22-25.
 136. Lathrop, Richard G., "Unit Factorial Ratings by College Students of Courses and Instructors." Chico State College, Chico, California, 1968 (ED 028 686).
 137. Lehman, H.C., *Age and Achievement*. Princeton: Princeton University Press, 1953.
 138. Lehmann, I.J., "The College Faculty as Perceived by Graduates and Non-Graduates," *Journal of Educational Measurement*, Vol. 3, 1966, pp. 169-173.
 139. Leigh, Terry, "A Selected and Annotated Bibliography on Evaluating Performance of College Faculty Members," Kentucky University, Lexington, 1969 (ED 035 376).
 140. Leslie, L.L., "Faculty React to Student Participation," *Journal of Teacher Education*, Spring 1970, pp. 53-58.
 141. Lewis, Edwin C., "An Investigation of Student-Teacher Interaction as a Determiner of Effective Teaching," *Journal of Educational Research*, March 1964, pp. 360-363.
 142. Lewis, Lionel S., "On Prestige and Loyalty of University Faculty," *Administrative Science Quarterly* March 1967, pp. 629-642.
 143. Lewis, Lionel S., "Students' Images of Professors," *Educational Forum*, Vol. 32, 1968, pp. 185-190.
 144. Lieberman, Myron and Michael Moskow, *Collective Negotiations for Teachers: An Approach to School Administration*. Chicago: Rand McNally and Co., 1966.
 145. Livingston, John C., "Collective Bargaining and Professionalism in Higher Education," *Educational Record*, Winter 1967, pp. 79-88.
 146. Logan, Albert A., Jr., "Ph.D. Surplus Seen Benefiting Faculty Unions," *The Chronicle of Higher Education*, August 31, 1970, p. 3.
 147. Lohman, James S., "The Professor's Influence on Students' Capacity to Value." Unpublished Ed.D. dissertation, Boston University, 1969.
 148. Lombardi, John, "Faculty in the Administrative Process," *Junior College Journal*, November 1966, pp. 9-16.
 149. Luthans, Fred, *The Faculty Promotion Process and Analysis of the Management of Large State Universities*. Bureau of Business and Economic Research, College of Business Administration, The University of Iowa, Iowa City, 1967.
 150. McCarthy, Francis, "An Analysis of the Effects of Collective Negotiations Upon the Leadership Role of the President in Selected Junior-Community Colleges." Ph.D. dissertation in progress, The University of Michigan.
 151. McDaniel, Ernest D. and John F. Feldhusen, "Relationships Between Faculty Ratings and Indexes of Service and Scholarship," *Proceedings*, 78th Annual Convention, APA, 1970, pp. 619-620.
 152. McElhany, James Harold, "Attitudes of Selected Professors at the Ohio State University Regarding Their Work Loads." Unpublished Ph.D. dissertation, Ohio State University, 1959.
 153. McGrath, Earl J., "Characteristics of Outstanding Teachers," *Journal of Higher Education*, March 1962, pp. 148-152.
 154. McKeachie, W.J. and D. Solomon, "Student ratings of Instructors: A Validity Study," *Journal of Educational Research*, January 1958, pp. 379-382.
 155. McKeachie, Wilbert J., "Research on College Teaching: A Review," ERIC Clearinghouse on Higher Education, Report No. 6, The George Washington University, Washington, D.C., November 1970. ED 043 789.
 156. McNeil, J.D., "Concomitants of Using Behavioral Objectives in the Assessment of Teacher Effectiveness," *Journal of Experimental Education*, Vol. 36, 1967, pp. 69-74.
 157. Mahey, Ann Carol, "The Authoritarian Dimension in Student Evaluations of Faculty," *Journal of Education Sociology*, January 1959, pp. 226-232.
 158. Markus, Frank W., "Negotiations Bibliography." Missouri University, Kansas City, School of Education, January 1968 (ED 023 178).
 159. Marmion, Harry A., "Unions and Higher Education," *Educational Record*, Winter 1968, pp. 41-48.
 160. Marris, Jerome G., "Some Academic Influences Upon Publication Productivity," *Social Forces*, March 1951, pp. 267-272.
 161. Marshall, Howard D., *The Mobility of College Faculty*. New York: Pageant Press, 1964.
 162. Martin, P.Y., "Selected Factors Which Influence the Pursuit of College Teaching as an Occupational Goal." Unpublished doctoral dissertation, Florida State University, 1964.
 163. Maslow, A.H. and W. Zimmerman, "College Teaching Ability, Activity, and Personality," *Journal of Educational Psychology*, March 1956, pp. 185-189.
 164. Medalia, N.Z., *On Becoming A College Teacher: A Review of Three Variables*. Atlanta, Ga.: Southern Regional Educational Board, 1963.
 165. Meltzer, Leo, "Scientific Productivity in Organizational Settings," *Journal of Social Issues*, Vol. 12, 1956, pp. 32-40.

166. Menges, Robert J., "Student-Instructor Cognitive Compatibility in the Large Lecture Class," *Journal of Personality*, Vol. 37, No. 3, 1969, pp. 444-459.
167. Meredith, Gerald M., "Dimensions of Faculty-Course Evaluation," *Journal of Psychology*, Vol. 73, No. 1, 1969, pp. 27-32.
168. Meyer, Elmer E., "Study of Undergraduate Student-Faculty Relationships at a Large University." Unpublished Ph.D. dissertation, University of Wisconsin, 1965.
169. Mills, Eric Roland, "Analysis of Degree of Faculty Satisfaction in Florida Community Junior Colleges." Unpublished Ed.D. dissertation, The University of Florida, 1968 (see also, ED 027 902).
170. Milton, Ohmer, "Survey of Faculty Views on Student Participation in Decision Making." Tennessee University, Knoxville, May 1968 (ED 024 332).
171. Moskow, Mike, *Teachers and Unions*. Philadelphia: Industrial Research Unit, Wharton School of Finance and Commerce, University of Pennsylvania, 1966.
172. Moskow, Michael (Conference Director), "Research Symposium on Employment Relations in Higher Education." Temple University, 1968.
173. Mueller, E., "Work Load of University Professors." Unpublished Ph.D. dissertation, University of Michigan, 1965.
174. Murdock, Royal P., "The Effect of Student Ratings of Their Instructor on the Student's Achievement and Rating." Utah University, Salt Lake City, 1969 (ED 034 715).
175. National Education Association, "Faculty Work Load: Report of a Survey in Two-Year Colleges." National Faculty Association of Community and Junior Colleges, National Education Association, Washington, D.C., May 1970 (ED 038 968).
176. National Faculty Association, "Faculty Evaluations and Termination Procedures." National Faculty Association of Community and Junior Colleges, Washington, D.C., 1970 (ED 043 319).
177. Nelson, Bryce, "Harvard: Beginning to Worry about Maintaining Its Faculty," *Science*, Vol. 156, May 19, 1967, pp. 922-925.
178. Nelson, Bryce, "A Surplus of Scientists? The Job Market is Tightening," *Science*, Vol. 166, October 31, 1969, pp. 482-584.
179. Newburn, H.K., "Faculty Personnel Policies in State Universities." Montana State University, Missoula, Montana, 1959.
180. Nolte, M. Chester and John Linn, "Background Materials on Collective Bargaining for Teachers: A Conference Guide." Education Commission of the States, Denver, Colorado, May 1968 (ED 039 628).
181. Oppelt, Marion, "Attitude of Community College Instructors Toward Student Groups as a Function of Certain Teacher Characteristics." Unpublished Ed.D. dissertation, University of Washington, 1967.
182. Parsons, Talcott and Gerald M. Platt, "The American Academic Profession." A Pilot Study, NSF Grant GS 5B, March 1968.
183. Pelz, Donald C. and Frank M. Andrews, *The Scientist in Organizations: Productive Climates for Research and Development*. Ann Arbor: Institute for Social Research, University of Michigan Press, 1967.
184. Piele, Philip K. and John S. Hull, "Administrator Techniques in Collective Negotiations: A Guide to Recent Literature." Oregon University, Eugene, April 1969 (ED 027 643).
185. Pratt, George L.B., "Flexibility of Personality as it Relates to the Hiring and Retention of Public Community College Faculty in New York State." Unpublished Ph.D. dissertation, New York University, 1966.
186. Priest, Bill J., "Faculty-Administrator Relationships," *Junior College Journal*, March 1964, pp. 4-8.
187. Rayer, Nicholas F., "College Student Rating of Instructors," *Journal of Experimental Education*, Winter 1968, pp. 76-81.
188. Rees, Richard D., "Dimensions of Students' Points of View in Rating College Teachers," *Journal of Educational Psychology*, Part 1, December 1969, pp. 476-482.
189. Rehmus, Charles M. and Evan Wilner, *The Economic Results of Teacher Bargaining: Michigan's First Two Years*. Ann Arbor, Michigan: University of Michigan, Institute of Labor and Industrial Relations, 1968.
190. Remmers, H.H., "To What Extent Do Grades Influence Student Ratings of Instructors?" *Journal of Educational Research*, Vol. 21, 1930, pp. 314-316.
191. Remmers, H.H., "Rating Methods in Research on Teaching." *Handbook of Research on Teaching*, edited by N.L. Gage. Chicago: Rand McNally, 1963.
192. Richardson, Richard Colby, Jr., "Staff Morale: An Investigation Involving the Development and Testing of a Differential Morale Attitude Inventory." Unpublished Ph.D. dissertation, The University of Texas, 1962.
193. Riesman, David, Joseph Gusfield, and Zelda Gamson, *Academic Values and Mass Education*. New York: Doubleday, 1970.
194. Roark, William R., "Career Orientations and Rewarded Activity as Perceived by Selected Junior College Teachers." Unpublished Ph.D. dissertation, University of Georgia, 1968.
195. Robinson, Lora H., "Improving College Teaching Through Faculty Selection and Evaluation: A Review," *Currents '70*, ERIC Clearinghouse on Higher Education, July 1970.
196. Rogers, J.F., "Staffing American Colleges and Universities," Report OE-53028, U.S. Office of Education, Washington, D.C., 1967.
197. Roose, Kenneth, "Fifty Top-Rated Institutions: Their Role in Graduate Education," *The Research Reporter*, The Center for Research and Development in Higher Education, University of California (Berkeley), Vol. 6, No. 1, 1971, p. 8.
198. Rubenstein, Joseph and Herman Mitchell, "Feeling Free. Student Involvement, and Appreciation." *Proceedings*, 78th Annual Convention, APA, 1970, pp. 623-624.
199. Russell, John Dale, "Faculty Satisfaction and Dissatisfactions," *Journal of Experimental Education*, December 1962, pp. 135-139.
200. Sage, Harry Bradley, "Relationship of Certain Personality and Environmental Variables to the Satisfaction with Present Position of Faculty in Selected Liberal Arts Colleges." Unpublished Ph.D. dissertation, University of Minnesota, 1962.
201. *Saturday Review*, September 19, 1970, p. 67. (Their data is latest U.S.O.E. and NEA figures and includes 1970-71. Sources like *Digest of Educational Statistics, Projections of Educational Statistics to 1976-77, Higher Education Research Report Series*, and others should be consulted.)
202. Schmidt, Charles T., Jr., Hyman Parker, and Bob Repas, *A Guide to Collective Negotiations in Education*. Social Service Research Bureau, Michigan State University, East Lansing, 1967.
203. Scully, Malcolm G., "Faculty Members: Liberal on Politics, Found Conservative on Academic Issues," *Chronicle of Higher Education*, April 6, 1970, p. 3.
204. Scully, Malcolm G., "Attacks on Tenure Mount; Limitations Are Proposed in 5 States," *The Chronicle of Higher Education*, March 22, 1971, pp. 1 and 4.
205. Sexon, J., "A Method for Computing Faculty Load." *Improving College and University Teaching*, Autumn 1967.
206. Sherman, Barbara R., "Some Characteristics of a Small-College Faculty," Unpublished Report, Center for the Study of Higher Education, The University of Michigan, 1969.
207. Shils, Edward B. and C. Taylor Whittier, *Teachers, Administrators, and Collective Bargaining*. New York: Thomas Y. Crowell, 1968.
208. Shock, N.W., E.L. Kelly, and H.H. Remmers, "An Empirical Study of the Validity of the Spearman-Brown Formula as

- applied to the Purdue Rating Scale," *Journal of Educational Psychology*, Vol. 18, 1927, pp. 187-195.
209. Singer, Jerome E., "The Use of Manipulative Strategies: Machiavellianism and Attractiveness," *Sociometry*, June 1964, pp. 128-150.
 210. Snibbe, Homer M., "The Relationship of Professors' Personality Characteristics to Grading Behaviors." Unpublished Ph.D. dissertation, University of Utah, 1970.
 211. Stallings, William M. and Sushila Singhal, "Some Observations on the Relationships Between Research Productivity and Student Evaluations of Courses and Teaching." Illinois University, Office of Instructional Resources, February 1969 (ED 027 838).
 212. Stecklein, John E. and Robert L. Lathrop, *Faculty Attraction and Retention*. Minneapolis: Bureau of Institutional Research, University of Minnesota, 1960.
 213. Stecklein, John E., *How to Measure Faculty Workload*. Washington, D.C.: The American Council on Education, 1961.
 214. Stewart, Clifford T. and Leslie F. Malpass, "Estimates of Achievement and Ratings of Instructors," *Journal of Educational Research*, April 1966, pp. 347-350.
 215. Stinnett, T.H., Jack H. Kleinmann, and Martha L. Ware, *Professional Negotiations in Public Education*. New York: MacMillan, 1966.
 216. Swenson, Norman G. and Leon Novar, "Chicago City College Teachers Strike," *Junior College Journal*, March 1967, pp. 19-22.
 217. Theophilus, Donald R., Jr., "Professional Attitudes Toward Their Work Environment at the University of Michigan: A Study of Selected Incentives." Unpublished Ph.D. dissertation, The University of Michigan, 1967.
 218. Thistlethwaite, D.L. and N. Wheeler, "Effects of Teacher and Peer Subcultures upon Student Aspirations," *Journal of Educational Psychology*, Vol. 57, 1966, pp. 35-47.
 219. Treffinger, Donald J. and John F. Feldhusen, "Predicting Students' Ratings of Instruction," *Proceedings, 78th Annual Convention, APA*, 1970, pp. 621-622.
 220. Twa, Robert J., "Student and Instructor Expectations of Community College Instructors." Unpublished Ph.D. dissertation, University of Oregon, 1970.
 221. Voeks, Virginia W., "Ridicule and Other Detriments to Effective Teaching," *American Association of University Professors Bulletin*, Winter 1954, pp. 621-630.
 222. Voeks, Virginia W., "Publications and Teaching Effectiveness," *Journal of Higher Education*, April 1962, pp. 212-218.
 223. Voeks, Virginia W. and Grace M. French, "Are Students Ratings of Teachers Affected by Grades?," *Journal of Higher Education*, June 1960, pp. 330-334.
 224. Walker, Billy D., "An Investigation of Selected Variables Relative to the Manner in which a Population of Junior College Students Evaluate Their Teachers." Unpublished Ph.D. dissertation, University of Houston, 1968.
 225. Weaver, C.H., "Instructor Rating by College Students," *Journal of Educational Psychology*, Vol. 51, 1960, pp. 21-25.
 226. Wilson, Robert C. and Jerry Gaff, "Student Voice—Faculty Response," *The Research Reporter*, The Center for Research and Development in Higher Education, Vol. 4, No. 2, 1969.
 227. Wispe, Lauren G., "The Bigger the Better: Productivity, Size, and Turnover in a Sample of Psychology Departments," *American Psychologist*, Vol. 24, No. 7, 1969, pp. 662-668.
 228. Yonge, George D. and Julius M. Sassenroth, "Student Personality Correlates of Teacher Ratings," *Journal of Educational Psychology*, February 1968, pp. 44-52.
 229. Yourglich, Anita, "Study on Correlations Between College Teachers' and Students' Concepts of 'Ideal-Student' and 'Ideal-Teacher'," *Journal of Educational Research*, Vol. 49, 1955, pp. 59-64.
 230. Zuckerman, Harriet, "Nobel Laureates in Science: Patterns of Productivity, Collaboration, and Authorship," *American Sociological Review*, June 1967, pp. 391-403.