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ABSTRACT

The trend toward increasingly limited opportunities for careers in colleges and university research, teaching, and service and possible courses of action to deal with the situation are discussed in this collection of papers. The focus is largely on decisions to be made on the individual college or university campus. Responses that the educational administrators can take to cope with the expected over-expansion of academic manpower in relation to the number of positions available include: action for effectiveness in utilization of faculty under so-called steady-state conditions; and steps toward improved adaptation of graduate educational programs, which are the primary source of academic manpower. The following papers are presented: "Demand For New Faculty in the South, 1976-1986," by David S. Spence; "Responding with Quality," by W. Todd Furniss; "Career Options and Program Changes in Graduate Education," by Cameron Fincher; and "Influencing Academic Outcomes: The Power and Impact of Statewide Program Review," by James R. Mingle. Enrollment assumptions on which the demand projections are based are included in the appendix. (SW)

THE CLOSING SYSTEM OF ACADEMIC EMPLOYMENT

Cameron Fincher
W. Todd Furniss
James R. Mingle
David S. Spence

One of a series of papers commissioned for the 30th anniversary of the Southern Regional Education Board

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FOREWORD

The title of this report may be gloomy in its suggestion that opportunities to pursue careers of college and university research, teaching, and service are becoming increasingly limited. The opening chapter presents evidence that this is indeed the case, while subsequent chapters examine responses which may be considered by educational administrators in their efforts to cope with the expected over-expansion of academic manpower in relation to the number of positions which are available. Responses include action for effectiveness in utilization of faculty under so-called steady-state conditions as well as steps toward improved adaptation of graduate educational programs, which are the primary source of academic manpower.

This focus on the closing system of academic employment centers largely on decisions to be made on the individual college or university campus. To view the alternatives in the larger context of the changing patterns of higher education, readers may refer to one of the companion publications in this SREB 30th anniversary series, *The South's Commitment to Higher Education: Progress and Prospects* by John K. Folger. That review of recent educational history indicates that the Southern states, in their race to catch up with the nation, have experienced a tenfold increase in production of doctorates in the last three decades, while completions of bachelor's degrees advanced only one-and-a-half times.

Although shortages of doctorates may still be evident in some academic fields and among some categories of our citizens, we are now at a crossroads. Can and should we assimilate an increasing output of doctorates through widespread upgrading of preparation levels in elementary, secondary and two-year postsecondary education as well as in some non-academic areas? Can and should we pursue a policy of systematic retrenchment where proliferation of graduate education is manifest? Or, as would appear likely, can and should we plan both for occupational upgrading and for selective retrenchment?

The Board is grateful to the authors of this report for the contribution each has made to our understanding of this important topic: Cameron Fincher, Director, Institute of Higher Education, the University of Georgia; W. Todd Furniss, Director, Office of Academic Affairs, American Council on Education; James R. Mingle, Research Associate, SREB; and David S. Spence, Research Associate, SREB.

Winfred L. Godwin
President

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CHAPTER ONE

DEMAND FOR NEW FACULTY IN THE SOUTH, 1976-1986

DAVID S. SPENCE

With leveling enrollments in the 1970s serving as an early warning of enrollment declines in the 1980s, a major problem which emerges is the declining demand for new faculty. Projection of substantial surpluses of potential faculty has significant consequences for graduate programs that prepare faculty, for management of institutions, and for state planning agencies.

During the decade of the 1960s, the average annual number of positions open for new faculty in the United States numbered about 38,000, approximately 14,000 of which were filled by new recipients of the doctorate. By the 1970s, due to enrollment stabilization and cutbacks in research funds, demand slowed to an average of less than 21,000 positions annually, approximately 11,000 of them for new doctorates.

Most projections for the 1980s indicate a total demand for new faculty of less than 7,000 positions per year, with demand for new Ph.D.'s dropping to less than 5,000. These changes amount to a decrease of 44 percent from the 1960s to the 1970s, and a 67 percent drop from the 1970s through the 1980s. Meanwhile, the annual supply of doctorates may be larger by as much as 20 percent by 1986 in the United States.[1]

This chapter has two purposes, first to provide projections of faculty demand for the SREB region and, second, to describe the characteristics of faculty as we enter the 1980s.

DEMAND PROJECTIONS FOR THE SOUTH THROUGH 1986

The projections provide an approximate baseline to which decision makers may look to help gauge ways of correcting current trends. Also, by highlighting the kind of assumptions made, the projections provide a point of departure from which decision makers can produce estimates, using alternate assumptions.

In projecting the demand for new faculty, two kinds of demand are considered — the total number of new faculty needed and the number needed who have recently earned a doctorate. "New faculty" does not include those faculty who move between institutions. Major attention is given to demand for new Ph.D.'s who will enter the job market directly from graduate schools. Thus, impending supply-demand imbalances between doctoral output and the need for new faculty are highlighted.

Three sets of demand projections for the South are presented, providing upper limits and lower limits as well as an intermediate alternative (Tables 1, 2 and 3 and Figures 1 and 2). Details on assumptions about enrollment trends, replacement factors and other variables are presented in the Appendix.

PROJECTED SUPPLY OF NEW DOCTORATES

The National Center for Education Statistics (NCES) projects that the number of doctorates will rise steadily from the 34,000 degrees awarded annually in the United States in 1976 to 42,000 doctorates by 1986.[2] The production of doctoral degrees in the South is projected by SREB to keep slightly ahead of the national pace and increase from about 7,500 in 1976 to more than 10,000 by 1986. In percentage terms, this represents a 36 percent increase for the South, compared to a 23 percent increase for the United States.

Before comparing the supply projections to the demand estimates for new faculty with the doctorate, one adjustment is made concerning doctorates in the fields of education. According to the NCES, over half of the additional degrees projected for each of the next nine years are in the various education fields. By the year 1986, doctorates in all fields of education are expected to compose up to a third of the total doctorates awarded. In the South, education doctorates are projected to increase by 46 percent; all other doctorates by 32 percent. The steadily increasing part that these doctorates are playing in the total picture in each year as 1986 aproaches suggests that an adjustment be made before comparing total supply of doctorates to demand. The adjustment would reflect

(*continued on page 8*)

TABLE 1

Demand for New FTE Faculty in the South (Instructor and Above) Estimated 1976-77, Projected 1978-86 (High Series)

Fall	Total Faculty Needed	Growth Need	Replacement Need	Demand for New Faculty	Demand for New Faculty with a Recent Doctorate
1975	139,278				
1976	139,537	259	6,268	6,527	3,720
1977	147,017	7,480	6,279	13,759	7,980
1978	151,178	4,161	6,616	10,777	6,358
1979	155,100	3,922	6,803	10,725	6,435
1980	159,329	4,229	6,980	11,209	6,837
1981	161,596	2,267	7,170	9,437	5,851
1982	163,305	1,709	7,272	8,981	5,658
1983	164,450	1,145	7,349	8,494	5,436
1984	164,451	1	7,400	7,401	4,811
1985	164,160	(291)	7,400	7,109	4,692
1986	163,574	(586)	7,387	6,801	4,557

Assumptions (See Appendix for detail):

1. NCES high projections of FTE faculty in U.S.; South's share of FTE faculty based on 27.8 percent share estimated for 1975, which is adjusted evenly each year by an increasing share of the nation's FTE enrollment (up one percent from 1975-86); the South-U.S. difference in student faculty ratio remains the same through 1986.

2. Replacement rate of 4.5 percent of total faculty in previous year.

3. Demand for new faculty with a doctorate as a percent of total new faculty demanded increases one percent per year from a base of 57 percent in 1976.

TABLE 2

Demand for New FTE Faculty in the South (Instructor and Above)
Estimated 1976-77, Projected 1978-86
(Low Series)

Fall	Total Faculty Needed	Growth Need	Replacement Need	Demand for New Faculty	Demand for New Faculty with a Recent Doctorate
1975	139,278				
1976	139,537	259	4,875	5,134	2,926
1977	142,290	2,753	4,884	7,637	4,353
1978	142,520	230	4,980	5,210	2,970
1979	143,310	790	4,988	5,778	3,293
1980	143,540	230	5,016	5,247	2,991
1981	142,186	(1,354)	5,024	3,670	2,092
1982	140,280	(1,906)	4,977	3,071	1,750
1983	137,826	(2,454)	4,910	2,456	1,400
1984	135,108	(2,718)	4,824	2,106	1,200
1985	131,575	(3,533)	4,729	1,196	682
1986	128,616	(2,959)	4,605	1,646	938

Assumptions (See Appendix for detail):

1. NCES low projections of FTE faculty in U.S.; South's share of FTE faculty based on 27.8 percent share estimated for 1975 and adjusted each year by an increasing student-faculty ratio (up 9 percent from 1976-86) and an increasing share of the nation's FTE enrollment (up one percent from 1975-86).

2. Replacement rate of 3.5 percent of total faculty in previous year.

3. Demand for new faculty with a doctorate based on 57 percent of total new faculty demanded applied to each year.

TABLE 3

Demand for New FTE Faculty (Instructor and Above)
Estimated 1976-77, Projected 1978-86
(Intermediate Series)

Fall	Total Faculty Needed	Growth Need	Replacement Need	Demand for New Faculty	Demand for New Faculty with a Recent Doctorate
1975	139,278				
1976	139,537	259	6,268	6,527	3,720
1977	145,104	5,567	6,279	11,846	6,870
1978	147,296	2,192	6,530	8,722	5,146
1979	149,520	2,224	6,628	8,852	5,311
1980	151,757	2,237	6,728	8,965	5,469
1981	153,152	1,395	6,829	8,224	5,039
1982	153,414	262	6,892	7,154	4,507
1983	152,816	(598)	6,904	6,306	4,036
1984	152,781	(35)	6,877	6,842	4,447
1985	151,879	(902)	6,875	5,973	3,942
1986	150,679	(1,200)	6,835	5,635	3,775

Assumptions (See Appendix for detail):

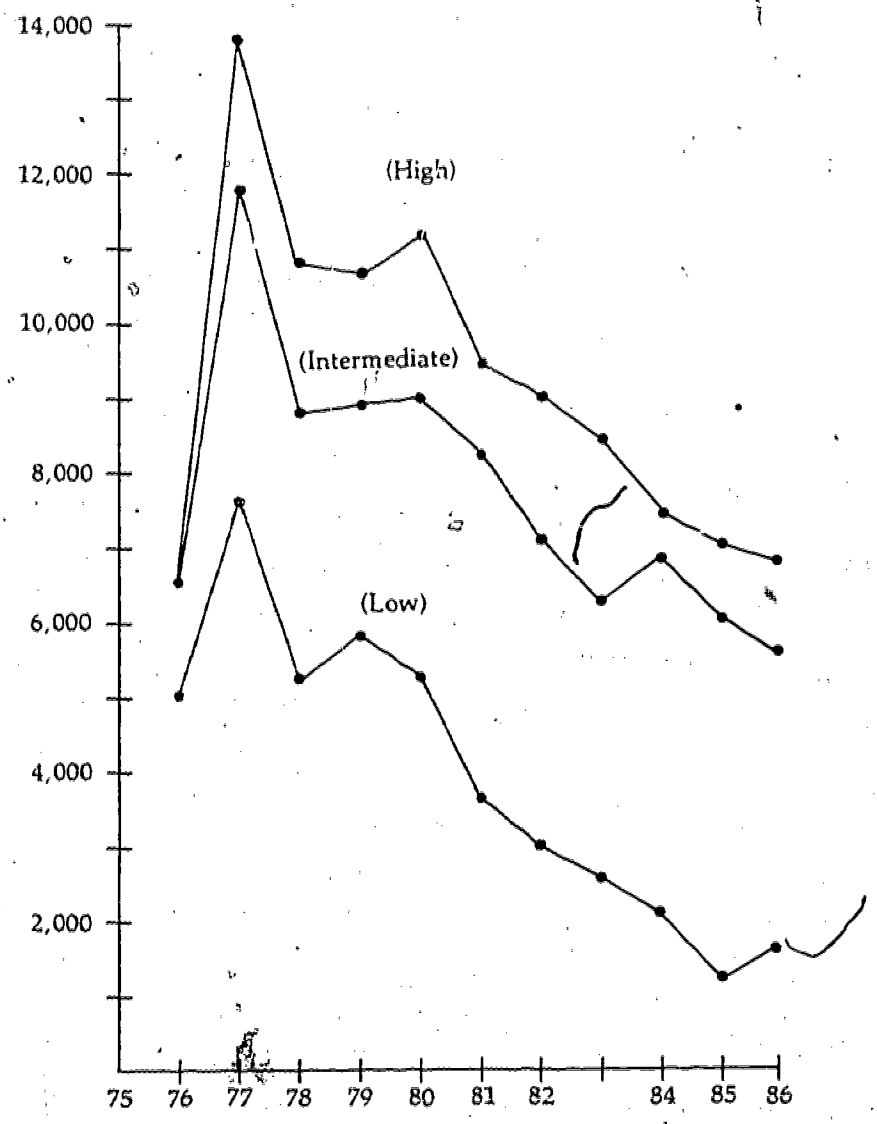
1. NCES intermediate projections of FTE faculty in U.S.; South's share of FTE faculty based on 27.8 percent share estimated for 1975, which is adjusted evenly each year by an increasing share of the nation's FTE enrollment (up one percent from 1975-86); the South-U.S. difference in student faculty ratio remains the same through 1986.

2. Replacement rate of 4.5 percent of total faculty in previous year.

3. Demand for new faculty with a doctorate as a percent of total new faculty demanded increases one percent per year from a base of 57 percent in 1976.

FIGURE 1

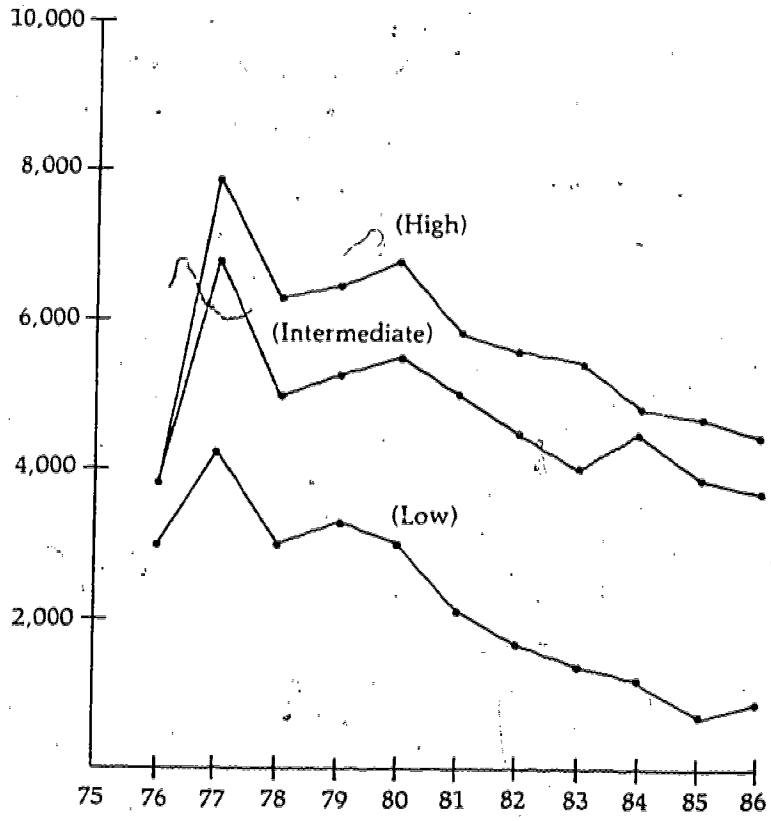
Demand for New Faculty,
Estimated 1976-77, Projected 1978-86
High, Intermediate, Low Series



Source: Tables 1, 2 and 3

FIGURE 2

Demand for New Faculty with a Recent Doctorate
Estimated 1976-77, Projected 1978-86
High, Intermediate, Low Series



Source: Tables 1, 2 and 3

(continued from page 2)
the fact that, by and large, doctorate-holders in education, whether Ph.D. or Ed.D., do not become faculty members in higher education. Most become administrators in postsecondary, secondary, or elementary institutions, or in management of coordinating agencies. In this light, it is appropriate that projected doctorates in education be subtracted from the totals.

SUPPLY AND DEMAND COMPARISONS

With the High Projections

Comparing these regional projections of Ph.D.'s in all non-educational fields with the high projections of demand for new Ph.D.-level faculty shows oversupplies of doctorates in each year after 1980, as demand starts to taper off and supply continues to rise slowly. By 1982, the surplus of supply over demand may be more than 16 percent of supply; for 1986, the excess grows to over 36 percent of supply. From 1981 to 1986, the surplus averages about 2,000 new Ph.D.'s annually, which is a 30 percent surplus.

These comparisons would not be so alarming at first glance except that they are based on what are conceived as the highest likely projections of demand. Moreover, regional projections do not take into account the certainty that some proportion of demand will be met by supplies of doctorates from outside the region, which tilts the picture even more. This last condition may prove especially trying to the South's supply-demand situation because new Ph.D.'s from all over the country perceive the South to be the last growing frontier for higher education. The same cannot be said for new Ph.D.'s from the South as they look to the rest of the regions in the United States for jobs in higher education, since other regions generally already have a severe surplus of doctorates.

With the Low Projections

The low projections indicate bounds below which it is unlikely that the demand for new faculty will go. Looking at the demand for new faculty with recent doctorates, the low projections show a decrease of 68 percent from 1976 to 1986.

Comparing the low series of projections of the demand for new doctoral-level faculty with the supply of doctorates projected to be available through 1986 indicates large surpluses of doctorates in the South. Even with education doctorates omitted, the surplus will be up to 44 percent per year from 1976 to 1980 and 80 percent for each year from 1981 through 1986.

With the Intermediate Projections

The intermediate projections of demand for doctoral-level faculty show annual surpluses of Ph.D. supply over demand in the South to average nearly 700 from 1976 to 1980 and 2,600 from 1981 to 1986. In percentage terms, these surpluses average 10 percent of total supply in the earlier period and 38 percent in the later years. The inclination of the average unbiased observer will generally be to consider this the most likely projection.

CONSEQUENCES OF DECLINING DEMAND ON CHARACTERISTICS OF FACULTY

As a result of the decreasing demand for new faculty, the characteristics of faculty in higher education promise to change over the next decade. Some of these changing characteristics, such as salaries, are considered in the Appendix as primary parts of the process that determines how many new faculty will be demanded. Other elements of the faculty profile that may change result from actions which administrators and faculty may take in responding to the declining demand.

First, as the hiring of new, young, junior faculty decreases, we may expect the age distribution of employed faculty to rise. The average age of faculty will be higher. With the rapid expansion of the teaching faculty in the mid-1960s, the age distribution was skewed toward the younger end, with the median age dropping to 40.[3] By 1986, as fewer young faculty are hired, the median age will be over 45. It could go up as high as 49 by 1990, if present policies for promotion, tenure and retirement hold and the outmigration rate of senior faculty remains unchanged.

A second expected change will be for faculty to have less mobility among institutions. During the rapid enrollment growth of the 1960s, one out of every 12 faculty with the doctorate changed institutions each year. But between 1968 and 1972, as enrollment growth slowed down, mobility decreased by over 60 percent to a point where only one out of every 20 faculty changed institutions.[4] As supply outpaces demand, institutions bid less frequently for the senior faculty of other institutions since they can hire quality faculty (at lesser cost) from the large supplies of new Ph.D.'s.

A third expected change resulting from the decreased demand for new faculty is a continued drop in the relative salaries of faculty. Because of more exact tenure, promotion, and salary schedules, academic salaries are not as flexible as they are in business or industry. Traditional wage theory suggests that academic salaries, relative to salaries in other employment sectors of the economy, will lag behind.

Relative salaries may decline through the 1980s, as faculty can be hired for comparatively less, owing to their greater supply in relation to demand. Since 1970, when the supply started to outstrip demand for faculty, the income of faculty compared to other professionals started to drop.[5] In turn, the decline in relative salaries may lead to the following consequences, each of which will have effects on the supply and demand balance:

a) A net outflow of senior faculty to other employment sectors (this may create more openings for junior faculty to be hired);

b) A larger proportion of new doctorates seeking initial employment in non-academic sectors of the economy;

c) Less graduate enrollment, as the value of the investment in graduate education drops with the decline in salaries.

A related effect will be the continued decrease in the differences in salary between junior and senior faculty. During growth periods, there is much bidding for senior faculty, and salaries are raised as an inducement for them to transfer. Also, during growth, there are fewer senior faculty compared to younger faculty. But in more stable periods, these trends are reversed. There is less bidding for senior faculty, and experienced faculty become a larger proportion of the total as fewer young members are hired. The differential between ranks has decreased since 1970, when supply started to exceed demand.[6]

Along with and, in some cases, because of the three basic trends just mentioned, there are other events that appear as likely consequences of the situation in which the supply of doctorates available for faculty positions is greater than the demand for them. We may expect a continuation of the trend toward more faculty with tenure. This is largely due to the shift upward in the age distribution of faculty, to the greater concern for job security during a time of less mobility, and to less bidding for senior faculty. From 1968 to 1977, the percentage of full-time instructional faculty with tenure increased from 47 to 56 percent in the United States.[7] Some experts expect an increase beyond 70 percent in the percentage of tenured faculty as we go through the 1980s and as the supply of Ph.D.'s compared to demand for faculty increases. While the proportion of tenured faculty in the South is slightly less, the pattern is the same.

The anticipated increase in the tenuring of faculty is expected to be cushioned somewhat by certain institutional responses, many of which are already evident today. Some of these responses are:

a) Fewer senior faculty will be hired. The percentage of new hirees with tenure will fall as vacancies are filled with junior faculty.

b) Because of lower relative salaries, an increasing number of senior faculty with tenure may leave for non-academic sectors of employment.

c) institutions may become more cautious about promoting faculty to tenure ranks.

All these responses may help to provide more places for junior faculty than might be projected in the absence of these policy changes. Another effect also stands out — of the junior faculty who are hired during this period of lesser growth, a larger percentage will have the doctorate than in the past.

RESPONSES TO THE CHANGING SITUATION

There are several kinds of responses higher education may make to the impending supply-demand imbalances, several of which are examined in this publication. One way to classify these responses is by determining whether they will affect the demand or the supply side of the faculty market. The demand for doctoral-level faculty will be influenced by the following responses, some of which may also affect the quality of an institution's faculty, and others which may emphasize cost savings.

Elevated hiring standards and stricter promotion and tenure standards are possible responses in times when supply of faculty with doctorates exceeds demand; enrichment in the quality of faculty in a system should result. The margin of supply over demand also allows for the lowering of student-faculty ratios at less overall cost than when demand exceeds supply. It can be argued that such a response should be chosen to improve the quality of outcomes at a time when it is most economical to do so.

It is also possible to meet the supply-demand situation with a set of responses that emphasize cost savings or greater efficiency. Forming policies that will limit the growth of salaries is one such option that is possible when supply is greater than demand. Hiring fewer senior faculty from other institutions or other sectors of the economy is another response that focuses on limiting of costs. Raising productivity standards is a third cost saving reaction to the supply-demand imbalance.

In addition to the responses aimed at the demand side, higher education can attempt to influence the supply of potential doctoral-level faculty who will seek employment within higher education. In this category are responses such as efforts to inform graduate students of the supply-demand situation in their respective fields or reviewing more closely all doctoral programs, with an eye to the manpower balances of the future — but somehow allowing for the possibility that today's surpluses may become tomorrow's deficits.

A third response on the supply side is to concentrate more on orienting doctoral students for the possibility of non-academic employment. The general widening of ways in which doctoral education is occupationally applied is certainly a legitimate objective in terms of benefits for society as well as for individual students (see Chapter 3).

NOTES

1. National Center for Education Statistics, *Projections of Educational Statistics*, 1972 and 1977 editions.

2. NCES, *Projections of Educational Statistics*, 1977 edition.

3. Allan Cartter, *Ph.D.'s and the Academic Labor Market*, New York: McGraw-Hill Book Company, 1976, p. 159.

4. *Ibid.*, pp. 160-161.

5. AAUP and Federal Reserve data cited in Cartter, *op. cit.*, p. 158.

6. Allan Cartter, *op. cit.*, p. 160.

7. National Center for Education Statistics, *Salaries, Tenure and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1977-78*, prepublication data, 1978; American Council on Education, *College and University Faculty: A Statistical Description*, Research Report, Vol. 5, No. 5, June, 1970.

CHAPTER TWO

RESPONDING WITH QUALITY

W. TODD FURNISS

Few colleges and universities, in the South or elsewhere, have not experienced declines in demand requiring the redeployment of at least some of their faculty and funds. So far, most of this appears to have resulted from shifts in student interest rather than declines in overall enrollments. As Chapter 1 suggests, however, we have entered a period when shifting interests are being accompanied by a stabilization of the absolute numbers of those — both youthful and older — who will attend college. Thus, even if student interests did not change, the demand for new faculty members will likely be a demand primarily for replacements. Although institutions might comfortably live on a "replacement economy," as they have in past times of stable demand, rapid growth of many of them since the early Fifties has introduced a new factor, the faculty "age hump": a clustering of tenured faculty members in the 40-55 age bracket. In the past, with an even age distribution, conventional retirement programs, and minimum inflation, a stable student demand provided regular, though small, turnover. Today, inflation is likely to discourage early retirement, and new legislation is likely to make later-than-anticipated retirement a matter of employee choice, so that turnover, already delayed by the "age hump" but expected to begin in earnest when the 55s reach 65, may be further delayed another five years or even longer.

Watching institutions that have begun to respond to these steady-state conditions provides some lessons, if not clear guidance. Ordinarily, they see their options for action in something like the following categories:

1. Increase the numbers of students, by competing for the students of other institutions or — more often — by trying to attract a new clientele from among workers, prisoners, and retired or other leisured persons.

2. Increase the price to the students or the taxpayers.

3. Increase the non-instructional income through an endowment/development campaign, special foundation grants for projects, government-funded training programs, or research grants.

4. Cut non-faculty expenses, for example, by reducing administrative forces, maintenance budgets, or library funds, tightening up on energy expenses, dropping "frills."

5. Cut faculty expenses by not replacing retiring or resigning faculty; increasing workloads; hiring new faculty at low (cheaper) levels; using one-year contracts; limiting tenure awards; cutting underenrolled programs and their faculty; limiting salary increases; cutting faculty benefits, travel, and research funds.

These measures are the kinds that trustees and administrators are likely to initiate. The faculty may well add a sixth: to hold out against any change, protect all the incumbents, and insist that faculty be redeployed into vacant positions for which they may not be properly prepared.

None of these measures is new. Since the publication of *Faculty Tenure*[1] (the "Keast Report"), a book setting out the nature of the dominant faculty personnel system, the problems foreshadowed in a survey of current tenure practice conducted for the study by the American Council on Education have become real and common. Within a year, "steady-state" became a catch phrase and administrative and faculty publications began to give attention to questions of tenure quotas and alternative systems, retrenchment, litigation, unionization, opening new nontraditional markets, and what to do to keep the bailiff away.

Most of these publications have maintained a more measured tone than one sometimes hears from a campus trying to cope. On campus, even when the loss of jobs is not anticipated, the threat of changes in curricula, in loads, in types of work, or varieties of students to be taught, promises that routines and relationships established with effort and compromise in the past will be altered in unknown and scary ways. The response is likely to be defensive — draw the wagons together against the forces of change; rely on rigidity rather than flexibility; go on an accountability binge; put

everything on paper, preferably in machine language because it appears more objective; get unhooked from as many commitments as possible, and refuse to make new commitments.

An alternative to the rigidity response is the try-anything or "panic-button" response — set up a "lifelong learning" program without either expertise or preparation; establish workshops for the local firefighters; cut admissions standards to get more students; hire a faculty star or two for the publicity; get a better coach; give more honorary degrees to the rich; use the library budget for advertising; accept 80 percent funding for a building you don't really need; cut off student aid.

Neither of these two characteristic responses is likely to kill an institution in the short run. In fact, either may give the illusion that the institution has been saved, and either may have a beneficial effect in buying time. But carried on for long, neither will preserve the institution and the jobs that go with it, because the first is unresponsive to legitimately changing needs, the second is unselectively responsive, and both ignore quality as the *sine qua non* for survival.

The situation described in the first chapter of this study does not in itself call for an emergency response on any campus, but it does call for a response. An institution proceeding from mid-1977 to mid-1978 on a "business as usual basis" has missed a year when it might have been usefully modifying its ways, but it is probably in better condition to meet the future than an institution that hurtled into responses characterized by rigidity or panic without considering the goals toward which changes should be directed. But whether it has moved in the wrong directions or not moved at all, the signs are clear that some changes — and some of them uncomfortable ones — will be needed if the institution is not to be damaged by demographic realities.

The thesis of this paper is simple: The changes an institution makes must be determined by a careful responsiveness to changing demands and by a definite plan to maintain and, where necessary, improve quality. Conversely, reactions that ignore changing demands or misinterpret them will place the dagger at the institution's heart, and responses that lower the quality of the program or of the faculty will drive the dagger home.

RESPONSIVENESS AND QUALITY

Responsiveness — as opposed to faddism — is the ability to adapt over time. The advent of the computer required responsiveness in colleges and universities, most dramatically in those serving a heterogeneous student body. Nuclear accelerators, electron

microscopes, and manned rockets led to other demands for responsiveness. Some fields have been altered more subtly, and the extent of the response is obscure. For example, the effects of television viewing on the traditional study of writing, rhetoric, and literature are not clearly known, but some disquieting changes in student interest in these subjects are evident in many institutions.

In times of economic and demographic expansion, responsiveness has usually been handled by addition, attrition, and retooling. New positions are filled with persons familiar with the new fields and subfields; positions vacated by those who resign and those whose skills are no longer current are filled by persons with up-to-date skills. And of course, in all cases, it is assumed that incumbent faculty will be assisted to keep their skills honed and polished. But in times of economic squeeze and demographic stability, these techniques to meet the requirement of responsiveness are likely to be curtailed.

The question of quality presents quite different problems. Where the need for responsiveness can be identified fairly easily and the means of meeting it can be debated with reasonable objectivity, questions of quality are inherently difficult to translate into programmatic terms that lend themselves to cool discussion. Robert Pirsig says, "You point to something as having Quality and the Quality tends to go away. Quality is what you see out of the corner of your eye."[2] Yet, though he does not define Quality (always with a capital Q), he says we know what it is when we see it and we can, if we will, act on it.

And because we know, and our students and other clients know, a college cannot for long "fudge" on quality and expect students to come. Cultural lag stands colleges in good stead when their quality is slipping because it permits time to correct inadequacies. But it does not last forever. And because we know what quality is — and our students and our clients know — a reputation soundly based on quality is a priceless asset. Not only does it attract supporters from outside, but it bolsters the confidence within the institution to make changes (i.e., be responsive), and to risk making hard decisions. Without quality, the institution can become rigid in defensive stances, unwilling to change except under extreme pressure or, just as bad, all too willing to change for the sake of a fast cure.

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[2] Putting our knowledge about quality into persuasive terms for legislators and donors is a special — and difficult — problem not solved by Pirsig.

Institutions

Probably there is no perfect institution — one with a perfect faculty teaching a perfect and up-to-date curriculum, with the flexibility (emotional as well as in resources) to meet new responsibilities, and with a workable plan to keep this perfect state of affairs through the social and economic changes of the future. But if there is an institution close to this ideal, it is that close because of the characteristics of the faculty.

In 1973, when the Keast Report was published and the economic and demographic recession was just being felt on campus, attention was first paid nationally to the problems that might arise from the age bulge among the faculty, and from the related question of the length of tenure. The tenure system of employment itself came under attack in institution after institution and state after state. In some instances, regents and legislatures set limits or quotas on tenure. For a time, there seemed to be a widespread belief that the quality of an institution, or its responsiveness, or both, were determined wholly by the percentages of tenured faculty members — the more highly tenured the faculty, the less responsive it would certainly be, and therefore, the poorer the institution's program.

Since it is the purpose of this discussion to consider the centrality of responsiveness and quality in institutional reactions to declining demand for faculty service, it is not out of place to look at three fairly common institutional models in relation both to quality and to the age and tenure distribution of their faculties. The examples are illustrative, not exhaustive.

A. The faculty 85 percent tenured, 10 percent on the tenure track, 5 percent visiting or part-time; excellent quality; among the tenured, an even distribution of ages from 35 to retirement; regular vacancies occurring through deaths and resignations to accept other jobs (faculty members of high quality are in demand elsewhere, even in tight markets). The turnover will be steady, and at the mathematical maximum within that steadiness. Responsiveness cannot be instant, as it was in very expansive days, but it can be solid and deliberate. Resources that in another institution might have to go to patching up errors, can be devoted to helping the faculty to keep fresh.

B. The faculty 50 percent tenured, 25 percent on the tenure track, 25 percent part-time and visiting; mixed quality in each group; good, but not even, distribution of ages. In this one, considerable opportunity exists to improve quality because of the chance for fairly rapid replacement of the poorer nontenured faculty members. Care is necessary, however, to be sure that the

flexibility is used for quality, not for expediency or quick response. The long-range goal should be set early. It will probably include raising the percentage of tenured faculty as soon as quality among the new appointments to tenure can be assured. However, the goal cannot be reached overnight: except for the really baleful cases among the tenured faculty, dismissal on the basis of incompetence is probably not justified, and help in improving performance and firmness in making assignments that match skills will be used instead. All these steps, if the institution is fortunate, can be taken with the certainty that good morale can be maintained and ultimately enhanced.

C. The same situation — 50 percent tenured, 25 percent tenure-track, 25 percent part-time and visiting; mixed quality; but a clumping of tenured faculty members between 35 and 50, and a preponderance of poor quality in this group. In such a situation, the blemishes of poor quality may already have decreased institutional appeal to students and supporters, morale may be low, and conflict may already have been begun by those refused tenure who claim better qualifications than those that have tenure. The tenured faculty are defensively entrenched, unable to move elsewhere, and under attack by the insecure nontenured. Practically no vacancies will occur through retirement or resignation among the tenured for many years. Looking at the tenured ranks, the administration and trustees may be extremely reluctant to grant tenure to anyone else and will decide to use tenure quotas in the hope of staving off collapse. Canute's chances were no worse.

The numbers of examples could be multiplied, but A, B, and C contain enough elements to illustrate a few guidelines for faculty and administrators planning for limited or no growth.

Strategy

For any of the three kinds of institutions, a strategy based on responsiveness and quality will set as a goal having a faculty of men and women distributed by age, fully qualified for their assigned work, and demonstrating excellent or better performance according to their length of experience; most of them will be full-time with tenure or with a reasonable chance of tenure; the part-time people will be carefully selected to provide for transitions in response to new program needs or to cover areas where full-time resources are not warranted by demand; the faculty will be personally secure enough to be willing to take risks and make difficult decisions and to retool as their fields require; they will be collectively committed to the welfare of the students and the institution and

ready to take a responsible part in institutional governance. The institution will see itself, and be seen, as a "supplier" of high-level graduates at all levels and fields in which it engages.

With respect to each of these goals (and others that may be chosen), where does a particular institution now stand? Is the quality of the faculty uniformly top-notch or weak in some areas? Is the program a good one? Are the students the right ones? (Not necessarily, "Are the students all highly qualified academically?" although, some institutions may set high academic qualifications as a criterion of selection.) What means of flexibility does the institution now have? How attractive are its faculty positions? How do they provide for renewal? Is service here exciting or dull or ulcer-producing? Whose morale is good, whose bad?

Putting the review of the present situation against the goals, it should be possible to sort out the jobs that need to be done. For some institutions, the jobs will be chiefly maintenance — maintaining quality and responsiveness while the world of knowledge and the needs of students change. For most, the job will be maintaining some parts of the operation while improving others. Perhaps the faculty quality is now good, the programs are now good, the students are now the right ones, but the college is ill-prepared to make changes if they become necessary, and it has given too little thought to how to maintain the level of faculty economic security in the face of inflation. For a few institutions, particularly those that have been like example C for a long time, attention will have to be given to every element. Even so, what needs to be done can be broken down into separate jobs, and priorities assigned. This makes a timetable important.

Example B presents a case where the institutional goal would include either strengthening or eventually replacing weak faculty members. This part of the institutional job is not likely to be accomplished quickly, but it need not take thirty years. Assuming the weaker faculty members are not so weak that no suitable job for them can be found now, and that they are capable of improvement or redirection, part of the institution's job is to take some positive action and not simply let the situation drift. The establishment of a sound program of reviewing regularly the work of all faculty members, including tenured ones, to help them plan their professional development three to five years ahead is a valuable tool even in the best institutions. It has the additional benefit of beginning to document cases of true incompetence or recalcitrant unwillingness to meet responsibilities that may have to be dealt with by dismissal. The point is that the timetable in a situation like the one in B must be sufficiently long to allow the adopted measures to work.

In C, it is quite possible that the timetable may need to be very long. If so, there should be some shorter-run sub-goals whose accomplishment will give everyone the courage to go on. And if the institution is in such bad shape that it is losing students and income at a fatal rate, the trustees will have to think about the unthinkable — closing up shop. It is possible that the investment of capital over five years might turn a very bad situation around, and that possibility must be considered. If this course is decided, it should be decided openly and pursued vigorously. If, however, the prospects for coming out with an institution of excellent quality are dim, an orderly closing will be a better solution than a miserable, slow, and litigious decline.[3] No universal recommendation can be made, but a fifteen-year timetable showing positive improvements in each three-year span is probably acceptable. Such a timetable requires patience and continuity and does not automatically fit collective bargaining time patterns. Considerable statesmanship will be required of both faculty and administration.

In fact, in even the best institutions there must be leaders in each of the estates: trustees, administrators, faculty, students, professionals. For success, there must be at least some agreement among these about goals and means, although there need not be identity of views on everything. A crisis — economic or demographic — may not only fail to destroy the agreement; it may make it stronger. Whether this will happen in a weaker institution is problematical. The outcome will depend not only on the conditions that prevail when the crisis occurs, and on the causes and depth of the crisis but, very importantly, on the aims, skill, and weight of the leaders. It is close to a certainty that no one segment alone can maintain an institution in good times or bad — not the trustees, the president, or faculty leaders. And human nature being what it is, some self-restraint among those who negotiate a consensus is not only good manners; it will pay off in the ease with which tough issues will be resolved.

In *Steady-State Staffing in Tenure-Granting Institutions, and Related Papers*[4] (1973), I listed and commented on a number of devices that might be used to adjust an institution from growth to a steady-state. Most of these still seem to be reasonably sound, but changes over the past five years make it worthwhile to review some of the ground again. Experience in even such a short time has shown that some tools can still be used with confidence and others might best be avoided altogether.

Program Quality

There are, of course, several reasons for modifying an institution's programs: they are out of date; they are poorly taught; there are no interested students; they are done better in a competing

institution; they are too expensive to maintain (or improve). The possibility of any of these may be a legitimate reason to examine a program. But each requires a comparative judgment — How out of date, how poorly taught, how uninterested are the students (and why?), too expensive with respect to what? Because it is not always clear at the start what measures are being used, the simple assertion of a deficient rating may be enough to cause budget-minded trustees, legislators, or administrators to mandate abolitions or alterations solely to save money and without regard to the quality or survival of the institution. The determination to make alterations in the program should be based on something better.

The question of overall institutional quality is far too complex to be more than sketched here. One way to see how difficult it is to grasp is to consider what might be commonly agreed to as the ten principal "indicators of quality," as there is some general agreement about the "indicators" of a bank's financial stability or the health of the nation's economy. We can list 1,000 different academic courses, thirty kinds of institutional facilities, forty student services, the background of the faculty members, the numbers (even the kinds!) of books in the library, the professional pay scale, the character of the institution's neighbors, the SAT's of its students, the size and wealth of its alumni body, and its income per FTE student, and we still do not know whether the institution is a good one or not. Even if we knew the courses were all taught splendidly, the facilities were in superior condition, the student services tailored to the students' needs, and so on, we still have not established the institution as one of superior quality in the eyes of all on whom it may depend for its well-being. Parents, students, alumni of various sorts, faculty members here, faculty members elsewhere, legislators, foundation officials, the Office for Civil Rights, the jury in a law suit, the policeman who handles rush-hour traffic — all will have different views. And even when two institutions have all the listed things in common, their evaluators may rate one institution better than the other because the match between its elements and its professed purposes is clear and the corresponding match of the second institution is faulty.

Therefore, to speak of "programs" and quality is to be biting off a great deal. Nevertheless, it must be done. Obviously, reviews of programs must be regular and detailed; weak areas must be strengthened or scrapped. Some less obvious points are likely to be forgotten, however, particularly when a program review appears threatening. For example, although an institution may measure its success on the ability of its graduates to get jobs in their fields, it must not overlook the values provided by the institution during the years leading to graduation. Thus, a program can be first-rate even

if the graduating student does not use it in a job. Another example: although institutions usually speak only of academic matters when they refer to their "programs," in fact their budgets are expended on a much wider range of programs — financial aid, student health, community cultural productions, rehabilitation services for the handicapped, grounds upkeep, maintaining a unique library collection within the general holdings, athletics, personnel benefits, and on and on. Although the academic program is central to the institutional purpose, the student, the alumnus, the legislator, the taxpayer, the donor, the clerk, the fire marshal, and the foundation executive may judge the institution's quality chiefly on the basis of non-academic programs. The point is that when some non-academic program is marked for a reduction in support, the consequences should be considered as carefully as those in the academic areas.

Just as the academic program depends for its quality on the characteristics of the faculty, so the quality of the other programs depends on the persons who staff them. Although the emphasis in what follows is on faculty, many of the suggestions apply equally to non-academic staff. In particular, it is necessary to be sure that such staff are trained for their jobs, and will be trained in the changes that the jobs will undergo. By now, it should be clear that a clerk who takes a coffee break on Friday instead of sending out the nonrenewal notices can cause a major personnel crisis. Discourteousness in any program can turn away supporters. Promptness and courtesy and expertise are to be fostered and cherished.

The need for staff expertise extends to one area in particular — the estimation of demand, which in turn will help determine which programs will be maintained, added, modified, or dropped. Part of the demand will come from changing student choices, part from changes in fields, and part from major policy decisions of the trustees (or legislatures or systems offices in state-supported institutions). In many institutions, federal funding priorities will also affect demand. For an institution like the B or C illustrations, there is considerable danger in overestimating a new demand or reacting too swiftly to the availability of new soft-money support. Either is likely to encourage the establishment of programs with a very limited future, and especially of ones for which there are no certified high-quality faculty or good curricula. It has sometimes been asserted that the best institutions are the ones most willing to experiment, and maybe this is true. But they experiment from a basis of being the "best." An institution trying to upgrade its programs should keep its focus first on doing very well the central things in its program and leave the experimenting until its basic programs are firmly established.

On occasion, of course, adding an unfamiliar program will be called for by a true local demand. If this is necessary, the best advice should be sought about how the program can be begun at the highest level of quality. If there is any danger that its initial quality would be low, the program should be postponed.

Faculty Quality

Just as the wise university administration operates on the basis that "All space in university buildings is university space," so it should assert that "All vacant positions are university positions." Neither departments nor divisions should "own" space or positions, although they may hold them for the present. Unless the institution acts on this basis, its hands are tied at the very beginning of a period of change.

There are other useful principles. All new faculty should be selected under high standards, whether they are on the tenure track or are expected to be only temporary. Ultimately, the impact of the academic program depends on the level of quality of each of its parts, not on some theoretical average of quality. Therefore, contract renewal standards for the new faculty should be set high, even though there may be those new faculty members who will complain that the standards for them are higher than those met by incumbent faculty. This is the "least qualified incumbent" notion that some federal agencies would foist upon higher education and which must be fought at every turn, and especially when the notion shows up in a college's own ranks. If standards are only those met by the least qualified faculty member (or administrator, student, or trustee), the enterprise will surely soon go to the dump.

Faculty quality must be defined in relation to an institution's missions. Although institutions tend to observe "pecking" orders and be imitative of a presumed "elite," there are no absolute standards applicable to all faculty apart from their roles. Therefore, in contract renewals, tenure awards, promotions, and salary increases, care should be taken to keep the standards reasonable — related to the program, achievable by the people that have been selected for appointment because they are known to be good, and without unnecessary or arbitrary hurdles. What the institution is shooting for is a solid increase in quality, not an impossible overnight perfection.

Although some positions are to be kept for temporary appointments to help with transitional requirements for responsiveness, in the long run the goal is a substantial percentage of tenured and fully qualified faculty members, with a small but regular turnover. If the goal is reached, the institution will not provide jobs for any more than a "normal" number of new Ph.D.'s coming out of the graduate

schools, but it will at least have good jobs for the good ones. No stable institution will be able to do more than this to solve the national Ph.D. employment problem, much as its faculty and administration would like to do so.*

In making appointments and especially in awarding tenure, promotion, and merit increases, the institution sends signals to the faculty, the students, and the public. The signals indicate what the institution considers important. A bad promotion has effects — all of them bad — far beyond the individual being promoted.

Regular reviews should be made of the work of nontenured persons. Those on the tenure track who appear halfway through the probationary period unlikely to qualify for tenure should be released, even though in a bad market there may be strong pressure to keep them. The pressure will be even stronger at the end of the period when the tenure decision must be made. Since the institutional goal is quality, a firm stance cannot be compromised. If the institution wishes to make provisions for cushioning the shock for non-renewed people, and can afford to do so, doing so would enhance the attractiveness of the institution as a place to work. (In the Sixties, one major state university not only helped pay the moving cost of new faculty, but also helped pay something toward moving away for some categories of faculty whose contracts were not renewed.)

Regular reviews of the work of tenured persons should also be instituted. The purpose must be primarily a helpful one — Where are you now, where do you need to move in the next three to five years, what will help? Whether this is done regularly but only semi-formally (e.g., with a notation of the plans put in the chairman's file) or with a formal "performance contract" resulting from each review will depend to a large extent on the situation in which the reviews are done.

Setting high standards for appointment and tenure is not in itself enough to attract the best faculty members. Faculty members will be attracted to an institution with a good reputation. They also will be attracted to and will stay at an institution where the reputation now may be poor but where good goals are being vigorously pursued and the conditions of employment are good.

Money is important, but it is not everything. Security is important, too. Initial appointments may safely be made for longer than a year if the standards for appointment have been high and care has been taken in applying them. For those on the tenure

*It can, of course, strive to produce the best among the nation's Ph.D.'s. See the discussion of graduate education in the steady-state in Chapter 3.

track, an initial three-year appointment provides a measure of security; the second apointment may be for four years. Reviews of performance in the interim should be chiefly to help the person qualify for tenure. If tenure looks doubtful, the person should be dropped after the third year, and certainly after the seventh. Those not on the tenure track may be offered contracts longer than one year if their services can be used. A five-year terminal contract for a newly-appointed experienced faculty member might be desirable, and would not violate age discrimination legislation if used sometimes for those in their senior years.

A number of institutions have recently considered extending the probationary period beyond the customary seven years or have sought some "special status" short of tenure for those faculty members 1) not qualified for tenure but whom they are reluctant to push out into a hostile market, or 2) qualified but whose appointment to tenure might have to be terminated in an anticipated enrollment drop, or 3) qualified for tenure but whose advancement to tenure would violate a prescribed quota.

In the first instance, as long as the college keeps the underqualified faculty member, it is prevented from finding a better qualified replacement and improving its program. The market is unlikely to improve for the underqualified, and the day of termination is simply put off while the decision becomes harder to make with each year. In the second instance, a sound personnel policy should provide for the termination of excellent faculty members — untenured or tenured — whose services are no longer required. Uncertainty about the institution's ability to make such terminations without destructive and expensive litigation has pushed institutions into refusing tenure to those who are qualified (example 2) and replacing them with temporaries, or into the adoption of an arbitrary quota (example 3).

Institutions trying to establish or maintain high quality in both program and faculty should carefully debate the consequences of denying tenure to the qualified on grounds like these. And faculty groups should be concerned to help in writing and administering reasonable policies for terminating qualified tenured faculty, not only those found incompetent after the imposition of charges. Until some accommodation to this matter is found, the economic and spiritual resources which importantly support the quality — and ultimate survival — of the institutions and their employees will be squandered in litigation and legal fees.

In these times also, no tenure-track appointments should be made of persons without the professional degree that will be required for eventual promotion to professor. The person trying to complete degree work cannot give full attention to teaching and

committee work, and in today's market such people need not be employed. The B or C institution especially cannot afford to be a training ground.

Particularly if there has been a history of "corner-cutting" and "featherbedding," the institution must establish a fair and open monitoring of the extent to which faculty members meet their responsibilities. The "goof-off" can be the proverbial bad apple. The approach should not be witch-hunting or punitive, and care should be taken that the institutional expectations are not unreasonably high or competitive. When responsibilities are met, the recognition of good work should follow.

In tight times, benefits are especially important. But all too often, benefits are established that bear little relation to what is really wanted by the faculty. Help in parking may be more welcome than a betterment of the dental insurance policy, and at lower institutional costs. And needs may often be met more economically on an individual basis, and have more payoff in quality, than by trying to provide exactly the same benefit for everyone, whether it is needed or not, simply out of a notion of "equity."

Faculty members are entitled to know that personnel matters are competently dealt with by trained staff, but they too have responsibilities for which they will need special training. Those who serve on committees recommending appointments and other personnel actions need not only to know the mechanics of the local peer review mechanisms, but also to be aware of and in sympathy with the goals — responsiveness and quality — and timetable of the institution. Some of this is a matter of "training," but the more important part results from discussion of the issues that must be resolved if the goals are to be reached. Some discussion will happen in faculty offices and the halls, but more formal opportunities for consideration are likely to be desirable.

Among the questions to be considered are, of course, what to do when faculty members believe they have been improperly treated. Good grievance procedures (whether called by that or by some less forbidding name) will help in establishing a sound basis for change and a way of adjudicating the inevitable stress that change brings. The grievance procedures built into a collective bargaining contract can be too narrowly focused to cover the full range of grievances an institution may have to deal with.

Wherever new policies are contemplated, decisions must be made about which of the incumbent faculty members are to be "grandfathered": i.e., made subject to the old rules and criteria, not to the new. Because certain practices (in a legal term, "past practice") may be more legally binding than even the written contract rules, some "grandfathering" will probably be necessary.

The legal and political issues here need debate. Remembering the signals given by each personnel action, a careful administration will think out the balance of risks and results for each case.

SPECIAL ISSUES

The foregoing comments have laid out some suggestions for parts of a coherent approach to fostering quality and responsiveness in an institution considering adaptations to a steady-state. Other issues will also have to be considered, either through internal initiative or stimulation from outside.

The question of centralization is one such matter. In doubtful times there is a tendency — even a need — to draw in the reins. "Direction," "monitoring," "accountability," even simple administrative or regental apprehension seem to dictate the centralization of control. But in good times, trustees, administrators, even legislators recognize that institutions run better when responsibility is widely distributed, along with the authority to make decisions. If the goal of the institution adapting to a steady state is genuine responsiveness and quality, it will have to accommodate these two positions. The importance of doing so is illustrated in the matter of how quality standards will be upheld. As long as faculty members have a say (as they must) in the appointment and promotion of faculty members, they must be given real responsibility for maintaining the necessary standards for institutional goals. If their participation is only window-dressing for a wholly centralized decision system, the faculty will treat their role perfunctorily or, worse, politically.

The centralized system is a hierarchical one. The decentralized system is less like a pyramid, even though final authority may have to remain with trustees. But for decentralization to work, the faculty, trustees, administrators (and other groups, depending on the issues) must come together, moved by the incentives of survival, personal security, pride in the institution and satisfaction with the work. Despite some legal restraints, this can be done in institutions with collective bargaining agents as well as in others.

Tenure Policy

At the onset of steady-state conditions, about the time of the publication of the Keast Report, some legislatures expressed considerable interest in alternatives to the traditional tenure system. One of the lesser issues in the time of student disorders had been the alleged protection tenure gave to the incompetent. Legislators were stimulated by visions of trading in high-paid

senior incompetents for stellar and cheaper junior people, and they demanded studies. The upshot was little change. A review to be published shortly deals with experiences of institutions around the country that never had tenure systems, or changed over. Apparently, it confirms the earlier speculation that the kinds of problems supposedly inherent in tenure systems are not cured by contract systems and may even be aggravated. The "pure" tenure system offers a good measure of security, but not absolute security — contracts may be terminated for incompetence or certain programmatic or financial reasons. It also provides that a considerable period of observation must be endured before the faculty member is finally judged fit or unfit for tenure. It also includes other elements of reward and recognition, not only tenure — promotions, salary raises, special opportunities. The notion behind the system, of course, is that anxiety (about the duration of the job, about the level of salary, about acceptance by one's peers) needs to be balanced by security (not only for the job itself, but the security that goes with recognition for good work). A contract system must contend with exactly the same balance. As in the tenure system, the less security, the more anxiety; beyond a point, high anxiety leads to demands for more security — quicker access to longer contracts; higher pay in lieu of security; possibly collective bargaining.

Tenure is not appropriate for every faculty member of every institution. But for those institutions that have made the considerable effort to find and engage faculty members of high quality, the tenure system provides the best balancing of institutional and faculty needs yet devised for keeping them, and keeping them productive.

Retirement Age

As this is written, the Congress has just passed an extension of the age discrimination legislation to protect employees up to age 70, thus making the maintenance of a policy of mandatory retirement prior to 70 illegal in colleges and universities.

The legislation provides that the prohibition will go into effect for most employees in January 1979, but for tenured faculty, not until 1982. It also provides that for most federal employees, there can be no set age for mandatory retirement. If this provision works in the federal area, it is very likely to be extended to the nonfederal areas.

The legislation raises a very large number of issues, ranging from broad ones to narrow and immediate questions. For example: the "rights" that employees have not only *in* their jobs but *to* their jobs (Are these "property rights" as defined constitutionally, or more

limited rights established by the terms of contracts?); the relationship between health and working (Is it such that the national interest requires the nation to keep jobs available for older people?); the relationship between the middle-aged and older person (Should the middle-aged bear an increasingly heavy burden of the support of the elderly, through mandatory Social Security and other forms of taxation?); the problem for some people of too many options, rather than too few (How many prefer not having to choose?); economic forecasts and inflation (Has inflation made it impossible for any but the very wealthy to enter retirement with confidence?). Less broadly, before 1982, can an institution really use the faculty exemption when its other employees are not subject to it? Are administrators holding faculty tenure subject to the 70 age (as administrators) or an earlier age (as faculty members)? How does an increase in the age to 70 affect the funding and benefits programs of institutions? (Note: not just faculty are involved.)

Both the broad and the narrow issues will be debated in the next several months. For the purposes of this review, one must be especially concerned with the effects, if any, of raising (or removing the limit on) the mandatory retirement age on an institution's responsiveness and its quality. It may well be that, in the end, institutions will conclude that the effects resulting from the legislation are not in themselves either good or bad; they neither save nor destroy the institution. Rather, they will be viewed differently by different observers, some of whom characteristically say that the glass is half full, others that it is half empty, and others who say it contains four ounces. After all, some 20 percent of the principal public institutions already have a retirement age of 70.

With retirement schemes, as with other elements in an institution's program, the issues must be considered not in isolation, or only in relation to what may be generally true in other colleges and universities, but rather should be examined in relation to the special circumstances and position of the institution now and where it hopes to be in five or fifteen years.

Alternative Employment

In an expanding faculty market, institutions worked very hard to persuade their faculty to stay with them and not move to greener pastures. With the onset of current conditions, institutions began to eye possibilities for easing middle-aged and older faculty members out of the ranks, either to free their salaries for other purposes or to allow replacements of better quality or differently trained. One device examined with hope — early retirement — has turned out to be almost a dead end because of continued inflation and the new

legislation. The other area still being developed is alternative employment and the related "retirement counseling" or "mid-career counseling." The two forms of counseling meet when the counseling starts early — at 45 or 50. The broadest form starts with the question, "What are you going to do with the rest of your life?" rather than, "What are you going to do when you retire?" It is quite possible that the new retirement legislation will stimulate some interesting and useful inventions for alterations in employment patterns for those beyond 50 or 60. It is far less certain that the results of career counseling for those fully employed in universities will move many of them outside their institutions or academia. Worth debating, however, is in what ways career changes (inside or outside the institution) might directly or indirectly benefit an institution striving to be responsive and to offer programs of high quality. And it may be that the conventional approach ("What do these kinds of counseling offer us in the way of tools to move people out of the institution?") should be replaced by the opposite approach ("How can we take advantage of an interest in alternative job and career patterns to bring more responsiveness and quality *into* our institution?").

PAST, PRESENT, AND FUTURE

For higher education, steady-state conditions are the historic norm. Institutional survival and growth over three hundred years in America have depended on the conscious working for quality in stable times, not on occasional booms in financial support and rates of attendance. With this in mind, we can proceed with confidence.

NOTES

1. *Faculty Tenure*, A Report and Recommendations by the Commission on Academic Tenure in Higher Education. San Francisco: Jossey-Bass Publishers, 1973.
2. Robert Pirsig, *Zen and the Art of Motorcycle Maintenance: An Inquiry into Values*. New York: Bantam Books, 1975. See also Paul J. Olscamp, "Quality, Quantity, and Accountability," *Educational Record*, Vol. 57, No. 3 (1976), pp. 196-201.
3. See John Millett, *Mergers in Higher Education*, American Council on Education for Academy for Educational Development, 1976 and Kevin-John H. McIntyre, Summer 1977, pp. 290-98.
4. W. Todd Furniss, *Steady-State Staffing in Tenure-Granting Institutions, and Related Papers*. Washington: American Council on Education, 1973.

CHAPTER THREE

CAREER OPTIONS AND PROGRAM CHANGES IN GRADUATE EDUCATION

CAMERON FINCHER

Graduate education is in a period of transition that requires close study. The suddenness with which its general outlook changed from high demand to oversupply is unusual and calls for critical analysis. There is consensus that graduate education in the South has made commendable progress in recent decades and is now a valuable national and regional resource. There is concern, however, that the changing demand for graduate and advanced study on a national level will affect adversely the efforts of graduate institutions to consolidate the gains they have made recently.[1]

The fundamental purposes of graduate education are at least three-fold. Programs of graduate study should provide for the education and professional development of talented individuals; they should preserve and enhance the knowledge and values that give meaning to advanced studies; and they should help create, develop or produce new knowledge and understanding. Research and scholarship in graduate institutions have produced and enhanced knowledge, and advanced programs in graduate institutions have educated larger and larger numbers of specialized or talented personnel for the needs of education, industry, business and government. To no small extent, the current difficulties of graduate institutions are a product of success in serving societal and national needs in a period of rapid growth and development.

The changing conditions to which graduate education must now adapt include a downturn in the labor market for new doctorates, a reduction of federal funds for research, an escalation of program costs and expenditures, and an erosion of the socio-cultural values that sustain inquiry and learning. Changes in career opportunities for doctorates are aggravated by uncertainties in graduate school applications as job openings for baccalaureates decline. The withdrawal of federal funds for research is compounded by cut-backs in other forms of federal support to graduate students. Inflation works its particular hardships at a time when educational costs are impossible to reduce. And public confidence has sometimes been missing when it was needed most.

The intent of this paper is: 1) to consider briefly the general implications of the changing job market for new doctorates, 2) to discuss alternatives or options in employment that might be open to doctoral graduates, and 3) to look at program changes or modifications that graduate institutions are currently making in response to changing conditions. Job markets are a significant part of the environment within which graduate education functions. New careers for doctorates are much discussed within professional societies, and changes in doctoral programs are obviously taking place. The combination of career options and program changes will be influential in shaping or molding graduate education for the coming decade.

JOB MARKETS AND PROJECTED DEMANDS

The projected demand for doctorates in scientific, technological and scholarly fields gives an uncertain picture of the future of graduate education. Its larger features are distinguishable, however, and clearly evident in the general outlook is a depressed academic labor market as outlined in Chapter 1. The projected decline in undergraduate enrollments signifies a lessening demand for junior faculty members to teach lower division courses; the reduced support of research and development implies a lesser need for research faculty and staff. Granting generous margins for error, these projections would still imply that new faculty will be needed for replacement pusposes only; the projected need for new faculty to meet enrollment changes falls to zero in the early 1980s and becomes a negative factor for several years thereafter.

The unattractive implications of these projections put great burden on the possibilities of increased utilization of doctorates in secondary and two-year postsecondary education as well as in non-academic labor markets. Although the relative proportion of Ph.D.'s entering the non-academic labor market has been quite large, the future utilization of doctoral skills and talents is depen-

dent upon the non-academic labor market's absorption of a larger proportion of doctorates in the next decade. One estimate suggests that the non-academic labor market may be required to hire as many as 80 percent of the Ph.D.'s completing their degrees in the 1980s.[2]

Adjustments to the potential oversupply of doctorates must be made both on the supply side and on the demand side, if widespread underemployment is to be avoided. Graduate institutions are challenged to restrict, judiciously, their overall production of doctorates and to make selective modifications in doctoral programs that are better attuned to future needs. Fields of specialized study for which there are limited opportunities in non-academic labor markets will present a particularly difficult problem. Where scientific and technological specialties may yet hope for placement in non-academic research and development, some humanities and social science doctorates will be without obvious opportunities when faculty replacement needs are minimal.

In brief, the projected demands and potential job market for the graduates of doctoral programs provide an uneasy outlook for the 1980s. Only broad generalizations, such as an obvious lessening demand for Ph.D.'s, are completely safe. The outlook is not consistent from academic discipline to academic discipline and variations occur among specialties within the same disciplines. The use of general categories, such as the physical and biological sciences, humanities and arts, behavioral and social sciences, and professional or applied fields, is helpful in understanding the overall picture, but generalizations must be closely qualified. New career patterns are discernible, nonetheless, and the job placement of new doctorates is concerned increasingly with other alternatives or different options that might be open.

CAREER ALTERNATIVES AND OPTIONS

The traditional career pattern of Ph.D.'s involves some mystical aspects that may be exaggerated in a period of changing patterns. The concern with career patterns in the 1970s is a reaction, in part, to the perceived suddenness of changes in the job opportunities open to new doctorates. Both the nature and the suddenness of those changes could be a function of expectations that were unduly formed in a relatively short span of rapid growth and optimism.

A broader perspective suggests that the 1960s were unusual and the expectations formed by graduate students during that decade were part of a "revolution of rising expectations." Somewhat obscured in the overall trends was a more traditional pattern that involved initial appointment as an instructor, extended proba-

tionary status as a junior staff member, and prospects for promotion only after an indefinite process of professionalization. Also unrecognized were the limited opportunities that doctorates frequently encounter in converting their research specialty and interest into careers. More important, a longer-range view of graduate education suggests that neither professionalization nor careerism have been unimportant influences. Although traditionally conceived as a research degree, the Ph.D. has long served the professional aspirations of faculty members in teaching, and many doctoral programs have clearly established professional purposes. Recipients of the degree enter doctoral programs and pursue degree requirements with full expectations that the program will prepare them to work as professionals or practitioners rather than as scholars or research scientists. Variations of the doctorate, such as the Ed.D., explicitly recognize professional needs and interests — and expectations that employment will be in administration, business, industry, government, or private practice.

Reactions to the job market of the 1970s include an energetic effort on the part of academic disciplines and professional societies to identify career alternatives for doctorates who may be shunted from academic paths. This effort follows easily from the general advantages that advanced study at the doctoral level gives recipients. Many doctoral programs have long provided a broad overview of disciplinary problems and issues and, depending on the degree of specialization, graduate education places a varying emphasis on applications and uses of specialized or technical knowledge. Examples are seen in the ease with which graduates of certain programs have found access to administrative positions within higher education; managerial or executive positions within corporate industry; technical or specialized staff jobs in government; and various consultative or advisory roles within foundations, professional associations, or social organizations. The interchange between these types of organizations and the academic world has been quite pronounced since World War II. The "brain trust" of the New Deal era exemplified a pattern which continues whereby professors take leave and become executives or administrators in government or industry, provide highly specialized and possibly esoteric services in a staff role, or pursue highly pragmatic ends with the means and the know-how they have acquired through advanced study and research.

Non-academic Employment

The search for non-academic job placement has precedents in non-academic research and development and in other forms of non-traditional employment. A host of societal and environmental

issues has focused attention upon the general problem-solving capabilities for which college and university faculty have been noted, and great emphasis has been placed on specialized roles that graduates of doctoral programs might play in resolving those issues. One premise is the belief that doctoral students acquire problem-solving skills and techniques that are adaptable to areas and issues other than those for which they were specifically developed. Scientific method, systems analysis, engineering design, statistical analysis, survey techniques, computer technology, and general communication skills suggest transferable capabilities. The transferability of these general capabilities is believed to make doctorates employable in many areas or fields where their predecessors have not been hired.

Diversity and versatility are still perceived as valuable assets in graduate education, and the Ph.D.'s fund of general knowledge, specialized competencies and methods of inquiry and communication are thought to lend themselves readily to the dominant problems and issues confronting contemporary society. Some of these issues may be identified as: 1) the global issues of energy, ecology, environment, population, and quality-of-life; 2) the professionalization of human services, 3) open participation and involvement in public policy, 4) the impact of industries and commercial services based on new technologies, and 5) an increased recognition of the social responsibilities of corporate industry and business.

Each of these issues reflects the social concerns of a democratic society in which there is a pervasive concern for cultural pluralism, minority rights and the equality of women. The list, needless to say, is not exhaustive and the various issues are not mutually exclusive. New careers for doctorates are expected to be based, however, on applied, problem-solving approaches to societal issues. The non-academic sectors of the overall job market to which doctorates are expected to flow are identified generally as corporate industry, business and finance; federal, state and local government; and various areas of private practice, self-employment or private enterprise.

Employment In Higher Education

As a final example of general possibilities, it is necessary to mention the diversified functions of higher education itself. The contemporary university, for example, employs numerous semi-professional, technical and supervisory personnel who do not hold faculty rank and who are not regarded as being in a tenure track.

Doctoral graduates may be employed as postdoctoral fellows with duties and responsibilities that would be performed at another time by graduate assistants.

More important, however, are the numerous specialists and technicians that now perform essential functions on a university campus. Laboratories, libraries, computer centers and learning resource centers are campus agencies that may employ large numbers of doctorates in non-teaching capacities. In many cases, faculty rank may be nominal or extended as a courtesy, but the individual's duties and responsibilities are not charged to the instructional budget of the institution and are not justified in terms of teaching duties. The function served is justified in its own right, if a permanent position, or justified on a project basis, if funded from the outside.

Also included in this particular area of employment might be numerous administrative specialists, planning and development professionals, legal advisers, institutional researchers, professional counselors and the various professionals and semi-professionals who work with students in the many areas of student services. Another significant cadre of "unranked" but highly competent doctorates may be found in the public service agencies and organizations of large universities. These may be individuals with well-defined specialties and technical competencies who have never been carried on an instructional budget or held faculty rank.

While some of these employment opportunities must be regarded as stop-gap measures in a difficult job market, institutions of higher education are increasingly staffed by specialists and practitioners who are not part of the tenured, teaching faculty. Universities cannot solve the placement problems of their doctoral graduates by "taking in their own wash," but if the public service and subsidiary functions of higher education had not expanded during the 1970s, the job market for new doctorates could have been much harsher.

Job Placement and Possibilities

The concern for career alternatives or options can be seen in the functions of professional associations as they mediate the aspirations of their membership and the public interest.[3] The efforts of some professional societies at the national level have been notable as they have tried to inform doctoral graduates of placement opportunities. The efforts of other professional associations have been less obvious and suggest an enduring faith in the "laws of supply and demand" for amelioration of current conditions in the job market.

Some observers have been firm in their conviction that Ph.D.'s will not go unemployed but will readily be chosen for lower level occupations. There is the belief that when doctoral demand is high, technicians and other specialists move up in the occupational structure to take the place of doctorates who might be engaged in relatively menial tasks. With oversupply of doctorates, there is the corresponding phenomenon of "bumping" in which doctorates will slide down the occupational scale, replacing technicians and specialists who, in turn, will replace or dislocate less qualified personnel. Neither the phenomenon of "bumping" nor the long-term effects of underemployment are well understood.

A more likely explanation may be the continuing upgrading of educational requirements for entry-level occupations. As higher levels of education have been reached by more and more prospective employees, the expectations of employers have risen accordingly. During the 1950s and 1960s, sales, supervisory and middle management positions that once required only a high school diploma were increasingly entered by college graduates. As more college graduates with specialized or first professional degrees entered the labor market, they helped create the demand for their enhanced credentials as well as satisfy that demand. The point might well be that education usually has been helpful in job seeking, and if Ph.D.'s are available for open positions, they might well be employed in preference to applicants with less education. The more jobs are seen as specialized, technical or semi-professional, the more likely entry requirements will be specified in terms of education.

In brief, career alternatives or options may be seen in the broad, general problem areas of contemporary society. New specialties or innovative applications of disciplinary knowledge will depend upon the lines of communication established between the discipline and the problem area but will also be influenced by the talents attracted to the discipline and the particular skills and competencies developed within the discipline.

Physical and Biological Sciences

The overall supply and demand picture is somewhat clearer for the physical and biological sciences than for other areas of specialization.[4] Although there is an increasing concern with technological development and potential applications within the physical sciences, the concern for alternative careers is not as acute because the job picture is not as dismal. Observations have been made, however, that graduate departments in all natural sciences are assuming more functions similar to those of professional

schools. The Ph.D. has an obvious increasing market value in industry because of new technologies that create a need for physical and biological scientists. In many instances, corporate industry seeks the same qualities in doctorates that universities do, and hiring practices may be indistinguishable.[5]

Some of the physical and biological sciences, nonetheless, are making concerted efforts to obtain information and guidance from industry in program revisions that will meet the needs of potential employers. Disciplines and specialties closely tied to the development and utilization of natural resources, such as chemistry and geology, maintain close contact with significant industrial developments. When new industries are launched in response to social trends or the development of new technologies, Ph.D.'s may be employed in either managerial or production design and development capacities.

The American Institute of Physics is engaged currently in a study dealing with the employment outlook for physicists during the next decade. Observers suggest that the job market has produced a blurring of the boundaries separating theoretical physics, applied physics and engineering. New careers may place more of a premium on creativeness and adaptability than on disciplinary preparation.

Physics is cited frequently as an exemplary discipline for the way in which the changing job market is handled. Approximately 1,000 Ph.D.'s enter the job market each year, roughly 25 percent of them in academic research or teaching. Both national organizations and academic departments are attuned to the nation's needs and the possibilities of oversupply. For the most part, career alternatives are not viewed as widely different from traditional placement opportunities.

Specialties in mathematics, statistics and computer science are not as actively concerned with career alternatives because the job market is not drastic. Chemistry openings in academic settings have declined and are expected to decline further, but since a large percent of chemistry graduates are placed in industrial and government research, the need for career options is not acute.

Job markets in entomology, botany, biochemistry and microbiology are seen as competitive but not unduly difficult for doctorates in attractive specialties. Biochemists are needed in the food industries; botanists are employable in conservation and environmental specialties; insect ecology is a growing specialty in entomology; and microbiologists may be the beneficiaries of job markets that are still expanding.

Geologists may find employment in environmental studies or the exploration, development, and management of nonrenewable

resources. Geographers, with specialties such as cartography, satellite analysis and remote sensing, are in sufficient demand to warrant optimism among faculty advisers.

Humanities and Arts

Reactions to the changing job market have been more strenuous in the humanities than any other general area of advanced study. Job placement has always depended heavily on academic labor markets, and Ph.D.'s who specialize in philosophy, history, literature or languages have traditionally been regarded as college teachers. Such disciplines are still characterized by heavy teaching loads at the undergraduate level and limited opportunities for research and scholarship in smaller institutions.

The activities of the Modern Language Association and the American Historical Association in meeting the changing demands of depressed job markets have been noteworthy. There have been strong attempts to inform prospective graduate students of limitations in the job market, and there have been notable efforts to assist in the placement of doctoral graduates. Also, many academic departments have re-emphasized their responsibilities for placement of graduates. Adequate placement is no longer thought possible either through centralized campus placement services or word-of-mouth communications among faculty members. Professional societies within the humanities and arts show a varying interest in placement efforts. The American Philological Association and the Archaelogical Institute of America, for example, run joint placement services, but do not collect statistical information on supply and demand.

Alternative careers are of obvious interest within many areas of the humanities. Doctorates in history are now employed in museums, libraries and archives; philosophy majors with an interest in logic are increasingly interested in computer applications and design; and specialists in literature and foreign languages display a growing interest in technical, practical, or commercial applications of their specialties. The extent to which new careers are open in the humanities and arts, however, is quite difficult to determine. Doctorates in history, literature, and languages — by virtue of being bright, articulate individuals — may find employment in literary or publishing occupations that are convergent with academic careers, but it is not easy to specify options or alternatives that follow naturally from coursework and study in graduate school. Yet, the humanities Ph.D. has perspectives and a concern with values that are noticeable to corporations seeking better communication with the general public. Industrial training and the broad concern with adult development, executive stress and mid-career anxieties suggest roles that the humanities and arts may play

eventually in corporate industry. For the present, however, movement into such openings is dependent upon individual initiative and adaptability. Certain fields of art, on the other hand, are applicable in community service or health service occupations. For example, the visual arts can lead to new careers in gerontology and recreation, or to new applications in expressive therapy.

Behavioral and Social Sciences

The behavioral and social sciences have identified an array of alternative careers in ecology, environmental, population and quality-of-life issues. Concepts and methods in applied areas of psychology, sociology, political science and economics are seen as particularly relevant to the issues as they have been defined for purposes of policy planning and development. Disciplines within this general area of advanced study also have many precedents for work in human and social services as practitioners or professionals in private practice.

The American Psychological Association has taken the lead in discussing career opportunities for psychologists in "expanding and emerging areas"[6] while the American Political Science Association has provided a guide for students and faculty in "career alternatives for political scientists."[7] Other disciplines have identified possibilities in recreation and community services while still others, such as anthropology, are able to place graduates in areas dealing with public policy issues. Many of these employment opportunities are temporary, however, and must be regarded as contract or "free lance" work that is primarily consultative in nature.

The continuing expansion of government services provides different possibilities for political scientists, sociologists and psychologists. Criminal justice, civil justice, crisis intervention, legal reform and court administration can be mentioned as job openings that bring behavioral scientists into the nation's legal-judicial system. Police departments, prisons and juvenile detention centers have frequently employed psychologists for diagnostic, consultative and training purposes. Drug and alcohol abuse programs involve training and educational components that are compatible with the training and preparation of many behavioral scientists.

Alternative careers are also seen in human resources development, staff development, occupational safety, environmental design, urban studies and business systems. The increasing concern with consumerism suggests other possibilities that may eventually use the talents of behavioral scientists more extensively. The number of psychologists, political scientists, sociologists and economists working in the various phases of program evaluation

has obviously increased during the past decade. Federal and state legislation sponsoring social action programs increasingly require forms of assessment or evaluation that almost dictate interdisciplinary approaches by behavioral and social scientists.

Professional and Applied Fields

Most of the disciplines represented in this general area still place doctoral graduates in traditional careers, and the interest in alternative careers will vary greatly from specialty to specialty. Engineering, journalism, management science, forest resources and agricultural economics are indicative, therefore, of areas of specialization in which the job market is pictured quite differently from that in the humanities or behavioral and social sciences. Doctorates in applied specialties, such as food science, generally find suitable openings within the academic job market, and Ph.D. graduates in veterinary medical fields appear to have ample opportunities in research or teaching as well as new openings in wildlife management, conservation and ecology.

Professional and applied fields, by their nature, are traditionally oriented to non-academic labor markets and have benefited in many specialties from the depressed opportunities in other fields. Nonetheless, practitioners make up a significant portion of most university faculties, and teaching opportunities are not as abundant as they have been in recent years.

Professional specialties in engineering and technology have been studied closely by the National Science Foundation and display a particularly different career pattern. Technological innovations and development remain important factors in a large number of career patterns, and engineers, as an occupational group, have been frequently cited for their versatility and adaptiveness. The changing career patterns of engineering and technical specialties are seen, nonetheless, in the promises of health systems, biotechnology, biomedical engineering, industrial biology, environmental health, and numerous other cross-disciplinary approaches that blur conventional distinctions between the physical, biological and engineering sciences. No other professional specialties illustrate better the interactions of subdisciplines and the possibilities of career options. Yet, engineering is one major field of specialization where the projected supply remains lower than the projected demand.

Agriculture and its related fields may be mentioned as an area in which considerable optimism about the job market can still be encountered. Specialties or disciplines such as agronomy, horticulture, agricultural engineering and poultry science still provide doctoral graduates with choices of appreciable latitude. One factor

favoring the job market for doctorates is the industrial demand for graduates at the master's level. Faculty advisers believe it is often advantageous to the individual to enter the job market early and to seek further training and graduate study while employed. Contrary to predictions of a few years ago, teaching positions have not declined because of the decreasing demand for agricultural courses.

Education is the most noticeable example of a professional or applied discipline in which the job market has become uncertain. Alternative careers for educational doctorates, however, may be seen in industrial and governmental openings that can utilize educational expertise in training and development capacities. Specialists in curriculum development and instructional methods may find openings in military organizations, government agencies and corporate industry. Instructional media specialists may be employed in libraries, private research and service organizations, and industrial training. Specialists in physical education may find "new" careers in community service or public recreation. Others, such as educational psychologists and counselors, may work in the private sector as special consultants or go into private practice.

Business, industrial and financial management may be mentioned as a professional or applied field with particular relevance for career alternatives. Placement possibilities or career options in many disciplines often "shake down" to management careers. Resource development and utilization, as a major social concern, suggest options for many specialties in the management of renewable resources (soil, water, air, plants and animals) and the conservation of nonrenewable resources (fossil fuels and minerals).

PROGRAM CHANGES AND MODIFICATIONS

There is irony perhaps in the fact that the Ph.D. has traditionally been regarded as a general degree and not as a specialized one. Doctoral programs have not been purported to train or prepare candidates for specific teaching fields or for faculty positions as such. It is the college or university in its role of employer that has placed such a high premium on the doctorate and not graduate departments in their provisions for advanced learning and study. Graduate education, however, has been notorious for its rigidity. Graduate faculty believe that advanced training and study should be research-oriented and should take place within a traditional discipline where the doctoral candidate masters the basic structure of that discipline and becomes something of a novitiate within a community of scholars.

Entry to graduate work depends not only on the opportunities that are perceived in advanced study but on the lack of opportunity seen in terminating one's education with a baccalaureate degree. If

opportunities and possibilities are unattractive upon the completion of the bachelor's degree, many students will be receptive to taking graduate work, whether or not attractive possibilities on receipt of the doctorate are foreseen. The depression years of the 1930s suggest that graduate work survives even when its rewards are hardly more noticeable than those at the undergraduate level.

New Clienteles

A major determinant of program changes to meet new demands is the increased rate of participation by women and minority groups. If future rates of participation are higher than anticipated, the status, mobility and professional advancement of new doctorates may be altered appreciably. Women have received over 20 percent of the doctoral degrees conferred in the past five years. Black Americans have received over three percent, while other minority groups combined account for approximately eight percent.[8] Virtually all efforts to project supply and demand are sensitive to the contingencies of increased participation by women and minority groups, but it is not known how well projected trends accommodate these contingencies.

Other conditions bearing upon the emergence of alternative careers are the participation rates of older, part-time, or irregular graduate students; the extent to which Ph.D.'s will be acceptable to community colleges that have avoided their employment in the past; and the likelihood of success for new kinds of doctoral degrees. The successful accommodation of part-time or irregular graduate students will require more flexible scheduling than graduate schools have permitted in the past, and institutional interest in or commitment to the part-time or irregular student may await satisfactory funding arrangements. Course scheduling has been dictated by the needs of traditional, on-campus students, and institutional resources are closely tied to full-time students. Yet the potential pool of nontraditional graduate students can be seen in the emphasis placed on continuing education for professional, managerial and technical personnel in midcareer and the strong emphases on adult development and career changes in general.

Increased pressures upon two-year or community colleges to upgrade their teaching faculties may alter significantly the demand for certain kinds of graduate work. If incentives are given in the form of salary increases tied to advanced study, community college faculty will undoubtedly seek additional graduate work. The National Board on Graduate Education has recommended the development of cooperative programs between community colleges and universities that will strike the right balance between disciplinary courses and instructional methods.[9] Alabama is one state

that has provided incentive by regulations directly affecting the salaries of community college staff.[10]

The implications of alternative graduate institutions and programs are difficult to draw. The emergence of Union Graduate School, Nova University, and Walden University suggests the existence of needs that presumably are not being met through traditional study, but the impact of these institutions is unknown. Their creation and popularity would appear to document the perceived needs of some degree candidates for individualized, off-campus instruction; greater participation in program planning and course selection; and more practical, directly relevant forms of research and study. Much the same can be said for graduate programs listed as innovative or experimental. One directory[11] lists over a hundred such programs and their requirements. The criteria for such classification would seem to depend primarily upon the relaxation of formal or organizational requirements in instruction. In brief, changes in the structural or organizational arrangements of instruction, such as residency on campus, internships and practicums, and independent or individualized study, are more noticeable than innovations in learning content and substance. The direction of change in the latter would seem primarily to be toward career-orientation and emphasis on service-learning.

Predictable Reactions

The "glut of Ph.D.'s" in the job market of the early 1970s was interpreted by some academic leaders as an opportunity to strengthen both graduate education itself and the professional standards of college faculties. The unplanned growth and expansion of the 1960s had produced unanticipated and undesired consequences, and the changing job market was to be welcomed if it could produce some much needed reform or stabilization.

Ways in which graduate education might be strengthened are: 1) increased selectivity for admissions to graduate work, 2) reduced time and effort in recruiting students, 3) improvement of student advisement and counseling, and 4) concerted efforts to review graduate programs for purposes of reducing nonproductive or excessively costly programs.

The experience of some research universities during the early 1970s suggests that reduced recruitment has been a more noticeable reaction than increased selectivity or better recruitment practices. Active recruitment of highly talented candidates has been increasingly difficult with the diminished support of graduate education by the federal government, and increased selectivity has not always been possible because of the candidates attracted to particular

graduate institutions and programs. The changing attitude of the federal government toward graduate education has been accompanied by changing values and attitudes in undergraduate students who at another time would be highly sought candidates for doctoral programs. Professional education fields, such as law and medicine, have been particularly attractive to undergraduates seeking ways to cope with social and environmental issues. By the same token, these same issues have led to a negative reaction toward science and technology by many students.

Improvements in the advisement of graduate students and better supervision or direction in the preparation of doctoral dissertations are difficult to detect. Enrollments in many programs have not dropped sufficiently for these particular purposes, and there is little certainty that graduate faculty will turn the use of spare time to the plans and interests of their students. Few impressions can be gathered that graduate education has yet returned, or is about to return, to the kind of close, personal relationships between faculty mentors and students that is sometimes envisioned. Numbers alone, if not the divergent interests and values of faculty and students, would suggest that graduate work will remain more independent and individualized than undergraduate education, but it will not become "ideal."

Commendable effort may be seen in the review of doctoral programs in graduate and research universities (see Chapter 4). State governing boards and coordinating agencies have shown a definite interest in program review because of the limited resources available to higher education in general and the competing demands of institutions and programs.[12] Forms of internal, self-initiated program review are increasingly evident, however, and signify an appreciable attempt to "heal thyself." Internal review procedures may include the advantages of self-study and the benefits of outside consultants or visitors. Graduate departments must gather and analyze the various kinds of data needed for program review, and professional colleagues in other departments can render valuable assistance through interviews with departmental staff and graduate students.

Graduate Work at Other Levels

The changing demands made upon graduate work at the doctoral level have both obvious and hidden implications for advanced study at other levels. The master's degree has acquired a dubious status during the years of rapid expansion at the doctoral level, but the number of master's awarded in the past decade suggests that the degree continues to have a certain attractiveness or marketability of its own.

The Council of Graduate Schools has issued a policy statement on the master's degree in which encouragement is given to the strengthening and improvement of work at that level.[13] Programs for master's work should encompass a well-defined and recognized area of advanced study and should be available to students seeking levels of academic accomplishment substantially beyond the baccalaureate degree. The master's would seem to be a level of graduate education at which both specialization and broad foundations should be encouraged. It is, in the opinion of many observers, the ideal location for experimental or innovative approaches to advanced study.

More important, perhaps, the master's degree continues to serve the educational needs of students seeking their first professional degree in various fields. The Master of Social Work, (M.S.W.), the Master of Business Administration (M.B.A.) and others are logical, terminal degrees for their respective specialties, and graduate programs offering such degrees have usually resisted pressures to upgrade their degree requirements unnecessarily. The success of the Master of Philosophy and the Master of Arts in Teaching degrees, both of which were originally intended to serve the needs of teaching faculty, has been less notable. The Doctor of Arts degree only recently has been given a "clean bill of health" by the Carnegie Council on Policy Studies in Higher Education.

Course Content and Substance

The extent to which doctoral programs are actively changing course offerings and are content to meet new demands or expectations is difficult to determine. A general impression is readily formed that institutions are actively considering program changes to accommodate new clienteles, such as junior college faculty and older, part-time students. Others are engaged in redefinitions of specialized fields of study through mergers or combinations of traditional majors, while still others are apparently interested in strengthening the use of minor or collateral fields of study. Higher education as a field of study, for example, has become of interest to doctoral candidates in traditional disciplines because it offers a collateral specialty or complementary exposure that could prove beneficial in the job market. The frequency with which doctorates enter teaching fields is still sufficient to suggest that courses in instructional methods or curriculum development can be an asset. Opportunities for administrative positions are plentiful enough to suggest that a background in academic organization and governance could be a decisive element in the candidate's credentials.

A more common response to changing circumstances in graduate education may be the addition or deletion of specific courses and re-directed emphases in instruction. The receptivity of academic

departments to courses or seminars in teaching methods is a noticeable change on some university campuses. Where "methods of instruction" once were thought unnecessary for bright, articulate graduate students, the depressed academic job market has brought a better appreciation of teaching effectiveness as such, and more willingness to "teach how to teach." The teaching assistantship is no longer sufficient for the development of teaching skills, and seminars or workshops linking disciplinary concepts and instructional methods make increasing sense.

Other "add-on" courses include efforts to provide subsidiary skills and competencies in research, communication skills, or project management — and general exposures to public policy issues or concepts of professional development. The intent obviously is to supplement the doctoral candidate's program of specialization with career-relevant coursework that could be helpful in the job market. The success of such courses is, as would be expected, impossible to determine in the short run. Many may suffer from forms of ad hoc panaceas that have not been successful at the undergraduate level — e.g. ethnic studies, female psychohistory, etc. — but they do represent a consideration of career placement on the part of academic departments and graduate faculty.

The active consideration of new or different careers for doctoral graduates and the reconstruction of courses or programs to serve those careers vary greatly from academic discipline to discipline and from institution to institution. Just as generalizations about supply and demand must be closely qualified by area of study, so must attempts to summarize program changes. The encouragement of new career patterns, however, will affect the choices and decisions made by doctoral candidates both in the selection of coursework and in job seeking. Modifications in degree requirements, program content, and course offerings will undoubtedly be made as doctoral students seek employment in alternative occupations and make their success or satisfaction known to their former mentors.

The extent of program changes within the physical and biological sciences appears to be dependent upon the perceived placement opportunities within industrial and governmental markets. Disciplines evidently maintain a *status quo* when their graduates are having no difficulty in postdoctoral placement or when there simply does not appear to be a significant non-academic market for its graduates. Virtually all the physical and biological sciences may be described, however, as "increasingly sensitive" to industrial, business and governmental sectors of the job market.

Program changes within the humanities include interdepartmental exchanges whereby students in history may take coursework in library sciences and students in Romance languages may take courses in business or journalism. Some disciplines such as philosophy, speech, and foreign languages have become greatly interested in providing service courses for other disciplines. Such courses can provide both an extended base of knowledge for students majoring in other disciplines and maintain course enrollments within the service department. Comparative literature courses have become quite attractive to older, part-time students who desire only to follow their intellectual and recreational interests.

For the behavioral and social sciences, modifications in program content or substance are seen in the broadening of subject matter courses that will lessen the emphasis on specialization, an increased concern with sharpening research and applied skills, and different distributional requirements for minor or collateral studies. Course content is revised in some instances to make its value more obvious to both graduate students and prospective employers. Other efforts include interdisciplinary approaches to social and cultural issues that place the discipline in better perspective.

No attempt is made to summarize program changes in professional or applied fields. Change is undoubtedly dependent upon the peculiarities of specific professions, and generalizations across professional specialties may be absurd. Many professional or applied fields have not experienced the shock waves felt in the humanities, and the impetus for program changes apparently comes from other sources. The overall demand for professional education has remained relatively high, and graduate students who once sought traditional disciplines have been turning increasingly to fields of study where the hope of tangible rewards has appeared better founded.

SUMMARY AND CONCLUSIONS

The uncertain job market of the 1970s has produced an extensive concern both within the professional societies and in graduate institutions for the career placement of new doctorates. As the academic job market has tightened, the search for other career options has intensified. Ph.D.'s are regarded as talented and versatile, and they are thought to have specialized skills and competencies that should be of service in non-academic occupations. With the continued possibility of a national oversupply, new doctorates must gain job opportunities increasingly in industry, business, government and other sectors of the non-academic job market.

The overall picture for new careers, different options or other alternatives varies greatly from discipline to discipline and from specialty to specialty within the separate disciplines. The broad, general category of physical and biological sciences gives employment outlooks that are quite different from those in the humanities and arts. The biological and social sciences differ in job possibilities from the larger category of professional or applied fields.

The resolution of career problems and issues requires cooperation among national agencies, such as the National Science Foundation, professional societies and associations representing the various academic disciplines, and the graduate institutions supplying the nation's doctorates. All three have vested interests in the national supply and demand of Ph.D.'s, and the overall process must be studied more systematically. Graduate institutions need better information about the placement of their own graduates; professional societies need better monitors for the dips and swings of job markets; and federal agencies need a closer working relationship with other agencies and institutions that are obviously concerned with similar or related problems.

By virtue of their talents and advanced study, Ph.D.'s must be regarded as a national commodity, and graduate institutions, professional societies and federal agencies must address the issue in terms of national needs. Regional and state variations are evident, however, and should not be ignored in program planning, development and evaluation.

Program changes in graduate education are diverse and extensive but may not address career problems and issues as directly as they should. Some suspicion must be expressed that many of the career options and alternatives explored in the 1970s are strictly stop-gap measures. Some observers believe that many Ph.D.'s will remain in non-academic positions only until such time when suitable academic appointments become available. But there is also reason to believe that experience in non-academic employment could benefit these returning Ph.D.'s immensely. Graduate education has been a cloistered experience in many respects, and the present concern with alternative possibilities is not without beneficial effects upon the overall perspective of Ph.D.'s.

Program changes in graduate education will undoubtedly continue on an incremental or gradual basis. Visionary reforms are neither urgent nor likely. Distinct advantages should accrue, however, if continued program changes include a systemic concern for instructional improvement both in the conduct of graduate courses and in the preparation of graduate students who will enter the academic labor market. Other program changes should be made with continued sensitivity to the caprices of job market and placement opportunities.

NOTES

1. Southern Regional Education Board, *Priorities for Postsecondary Education in the South*, Atlanta: SREB, 1976.

2. Allan M. Cartter, *Ph.D.'s and the Academic Labor Market*, New York: McGraw-Hill, 1976.

3. See David A. Trivett, *Graduate Education in the 1970's*, Washington, D.C.: American Association for Higher Education, 1977; Ana L. Zambrano and Alan D. Entine, *A Guide to Career Alternatives for Academics*, New Rochelle, N.Y.: Change Magazine Press, 1976; and various publications by different professional societies such as the Modern Language Association of America, *A Guide for Job Candidates and Department Chairmen in English and Foreign Languages*, New York: MLA, 1975.

4. Betty M. Vetter, *Supply and Demand for Scientists and Engineers:* A Review of Selected Studies, Washington, D.C.: Scientific Manpower Commission, 1977.

5. Most of the observations reported in this and following sections are based on interviews with over 30 graduate coordinators in various fields of graduate study. Other sources include the publications of the National Board on Graduate Education, especially *Outlook and Opportunities for Graduate Education: The Final Report*, Washington, D.C., NBGE, 1975.

6. Paul J. Woods (Ed.), *Career Opportunities for Psychologists* Washington, D.C.: American Psychological Association, 1976.

7. Thomas E. Mann, *Career Alternatives for Political Scientists: A Guide for Faculty and Graduate Students*, Washington, D.C.: American Political Science Association, 1976.

8. Data from National Research Council reported in *The Chronicle of Higher Education*, March 27, 1978.

9. S.V. Martorana, William Toombs, and David W. Breneman (Eds.) *Graduate Education and Community Colleges*, Washington, D.C.: National Board on Graduate Education, 1975.

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12. "Planning for Statewide Program Approval and Review," *Issues in Higher Education*, No. 11; Atlanta: SREB, 1977.

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CHAPTER FOUR

INFLUENCING ACADEMIC OUTCOMES:

THE POWER AND IMPACT OF STATEWIDE PROGRAM REVIEWS

JAMES R. MINGLE

Pessimistic projections of the need for new faculty lead inevitably to the questions: What can be done about it? Will the market adjust itself? Will the institutions responsible for the production of new faculty adjust themselves? What can and should statewide planners and decision makers do?

This chapter is concerned with the states' response to the question, "What can be done?" Its basic assumption is that neither market forces nor the institutions acting alone will alleviate the problem fully. The states' options to confront these difficult and complex questions are several; but none of them are thoroughly satisfying.

Statewide planning and evaluation of higher education have developed rapidly in recent years with authority settling primarily in the hands of regulatory coordinating boards and central governing boards. Their ability to influence the academic outcomes of institutions, however, is constrained both by knowledge and long-standing traditions of academic freedom and institutional autonomy. State planning agencies can implement change through analytical studies and budget recommendation, but the effect of these actions is limited. For the most part, higher education continues to be funded on an incremental basis — last year's budget is the base for this year's, leaving little flexibility. Formulas are equity devices designed to distribute funds according to shares of enrollment, not

academic outcomes. Institutional management prerogatives usually prohibit much direct control by states over the allocation of dollars to specific programs and objectives. Analytic studies and manpower projections done by state agencies, while valuable tools, depend on the more indirect power of information and "fact" to influence. Findings which demonstrate the need for new kinds of graduates and a declining need for others can be and are sometimes ignored.

The power to approve new programs and review and terminate existing ones is a different matter, however. But, review of academic programs, even when carried out by the higher education community itself, is a highly sensitive subject. Intrusion into questions of quality and institutional freedom as well as the potential power of program review are involved. Aspirations of growing institutions can be limited, other institutions expanded, interinstitutional cooperation mandated and programs terminated. These decisions can bring about sweeping and often painful changes in the institutions which experience them. Used wisely though, program approval and review powers can be higher education's most effective tool for rational planning and accountability.

A number of states, through coordinating and consolidated governing or system boards, have undertaken academic program reviews of their institutions' existing programs. In some states, review has been limited to public institutions; in a few, both public and private have been included. A variety of approaches have been used, stemming from different motivations and using different criteria for evaluation. Brief summaries of activities in Florida, Virginia, Tennessee, Kentucky and New York, and a more detailed study of the recent review in Louisiana, describe approaches taken. These examples suggest two distinct types of review: quantitative ones concerned primarily with degree productivity; and qualitative ones concerned with a broader set of criteria — duplication, efficiency, need and effectiveness.

Central to this inquiry are the answers to questions about the efficacy of statewide review and its impact on institutions, both intended and unintended, as well as its relationship to manpower considerations, cost savings, planning and coordination, and qualitative improvement.

SELECTED STATE REVIEWS

Virginia

Virginia's review of existing programs, conducted by the State Council of Higher Education, is limited to quantitative factors, namely, degree productivity. With community college programs

reviewed one year and senior level programs the following year, the Council conducts its review of public institutions once each biennium. Qualitative evaluation, the Council notes, is "at least as important" as degree productivity, but the responsibility to assess quality remains with the institutions.[1]

The first step in Virginia's evaluation is the tabulation of degrees conferred in each program at each level and calculation of the average per year over several years. The review allows for recognition of start-up time for new programs, exempting, for example, doctoral programs begun within the past four years. Using an annual average over five years, bachelor's programs are expected to produce five degrees per year; master's programs, three; and doctoral programs, two. Programs which do not meet these levels can be justified for continuance on the basis of service to other programs (courses offered by one program but used by other programs) and/or research projects underway.

Since 1974, Virginia's quantitative review has resulted in the termination of 143 programs, including 10 at the doctoral level. The cost impact, however, has been minimal. With few students and few resources devoted to low productivity programs, little direct saving is achieved by termination. Library budgets are affected, however, since they are explicitly tied to the number of programs by level.

Tennessee

Tennessee's efforts to review existing programs have also been quantitative in nature. Initiated by the Tennessee Higher Education Commission (THEC) in 1974 and conducted again in 1977, the reviews consisted of identification of programs at all levels with low degree productivity, followed by independent evaluations by the two institutional governing boards in the state. Programs are classified as low-producing according to level, age of the program and average number of graduates during a four-year period. For example, associate degree programs in existence for longer than four years with average degree production of less than 10 graduates were included in the low production list in 1977. Likewise, doctoral programs over six years old with less than an average of three graduates per year were included.

The two governing boards have developed additional criteria to evaluate low-producing programs, including standards for faculty load, cost per student credit hour, utilization of courses in other programs and "headcount" enrollment of majors. The review in 1977 produced a list of 293 low-producing programs (about 30

percent of all programs offered in the state). Of this number, the governing boards chose to terminate 11 programs, consolidate 13 additional ones and continue to monitor 140 other programs for either one-year or three-year in-depth reviews.

As the Tennessee Commission notes in the summary report of the review, the elimination of low-producing programs does not necessarily mean cost savings. By definition, these programs have few students and generate few dollars through the formula system in Tennessee which links enrollment directly to appropriations. The cost impact of the 11 programs eliminated was estimated by THEC at $35,630, an amount which represented the estimated appropriation generated by these programs for FY 1978-79, had the programs been operational in fall, 1977. Eight of the programs terminated had zero cost impact, representing situations "where the production of graduates was virtually nonexistent (and) the institutions had already reallocated the faculty positions to more viable programs."[2]

Florida

Florida is an example of a state which has evolved from a review dominated by quantitative factors to one which is primarily qualitative in nature. Initiated and conducted by the State University System (SUS) in Florida (a central governing board for all public senior institutions), program review prior to 1975 was limited to an annual analysis of degree productivity at different levels. Underproductive programs were placed "on probation" and if they remained underproductive for three consecutive evaluations, were subject to in-depth study (which included qualitative considerations) and possible termination.

The procedure produced substantial opposition among faculty and administrators in the institutions, who argued that the principal purpose, despite the qualitative aspects, was to terminate programs. Further, they objected strongly to applying the term "probation" to the underproductive programs identified by the Regents' staff. While the term may have had appeal to legislators, and possibly to the lay public, in the minds of the faculty it left the program with a stigma from which it was difficult to recover.[3]

Beginning in 1976, the review of programs in Florida was substantially altered. Now, in the first cycle of a five-year continuous process, SUS has undertaken the review of all programs in its institutions. Reviews are conducted of programs, across all levels, at the same time. While discontinuance of programs is one possible outcome, the emphasis has shifted to qualitative considerations, which can mean enhancement as well as termination and other options. Unlike the pre-1976 evaluations, outside consultants now

play a major role in the process, a change which the System office notes has greatly increased the cost of evaluation.

Evaluations began with teacher education and engineering programs in 1976, along with the independent studies and external degree programs offered in two institutions. By spring, 1978, reviews had also been completed in oceanography and marine science, foreign languages, classics, linguistics and nursing.

The Board of Regents has accepted a wide-ranging set of recommendations from the review process thus far. In place of a proposed new engineering program, the engineering review recommended a consortium arrangement for the southeast Florida area. In teacher education, some doctoral programs will be phased out (Florida Atlantic University and the University of South Florida) and a recommendation was adopted which aimed to limit undergraduate education enrollments statewide. As a result of the program review, the Institute of Oceanography was directed to revise its plans to include participation of private institutions. The Board also adopted the recommendations of the consultants to phase out a bachelor's program in nursing at Florida International University.

Kentucky

Kentucky's review of programs falls into the qualitative category. Begun in 1976, the review was limited to doctoral programs in the two institutions which offer programs at that level — the University of Kentucky and the University of Louisville. The review was conducted by a panel of consultants drawn from outside the state.[4]

The institutions were asked to submit selected data about all of their doctoral programs and, from these, a number were selected for intensive review, which included on-campus visits. The panel chose to hold on-site evaluations of all of the University of Louisville programs and a selected number at the University of Kentucky. The panel, in its own words, focused on quality but "inevitably" was also concerned with other criteria, such as need, costs and benefits.[5]

Panel consultants did not make specific recommendations on discontinuance, but recommended, in some cases, that programs be "markedly improved or suspended" until a further "expert" evaluation could be conducted. A small group of programs at both the University of Louisville and the University of Kentucky fell into this probationary category. The "expert" evaluations were not conducted, however; the Council decided to postpone action and study more closely the question of need for the programs before proceeding. Following the doctoral reviews, the Council also chose

to expand its review to the bachelor's and master's level so that decisions about a particular program would benefit from evaluation at all levels.

The panel found that most doctoral programs in the state were relatively small and involved minimal cost, although they admitted that cost was difficult to determine, especially since evaluation had been concerned only with the doctoral level of degree programs.

Program review in Kentucky was part of an overall effort to revise the "role and mission" statements of the state's universities in an effort to make them more specific and eliminate duplicative efforts. The principal conflict came over the respective roles of the University of Kentucky and the University of Louisville, both of which fought hard to prevent any restriction on their current operations and future aspirations. Initial proposals that called for designation of the University of Louisville as the state's "urban university" (which implied a more limited array of programs) brought significant opposition from both of the institutions. The University of Louisville objected by arguing that the state should expand, not contract, doctoral education. Furthermore, the University of Kentucky objected to Louisville's designation as "the urban" institution as a possible basis for restricting its own offerings. The final compromise reassured the University of Kentucky of its responsibility to offer programs "in all fields," while Louisville was told that the criterion in terminating programs would not be duplication with University of Kentucky programs, but whether these programs fit the institution's "urban" mission. In the words of one observer, it was a compromise which designated Louisville as "more than a regional university, but less than the University of Kentucky."

New York

Postsecondary education in New York is presided over by a Board of Regents which has the responsibility for planning and coordination, registration of institutions and program approval for both public and private institutions. The Regents appoint the Commissioner of Education, who is the chief executive officer of the State Education Department. There are two statutory public institutional governing boards in the state — one for the State University of New York (SUNY), consisting of 35 two-year institutions and 29 senior institutions; and one for the City University of New York (CUNY).

Through the staff of the New York State Education Department, the Board of Regents became increasingly concerned with the evaluation of doctoral education in the early 1970s. In 1972, the

Regents announced the creation of a Commission on Doctoral Education which released its report in 1973. Among other recommendations, the "Fleming Commission," as it came to be known, recommended that the Regents undertake comprehensive evaluation procedures for its doctoral programs.[6]

The Board initiated a review procedure using outside consultants in 1973, beginning with seventeen Ph.D. programs in history. In the next two years, reviews were also completed in astronomy, English and physics.

The resulting terminations at both public and private institutions shocked and angered the institutions, especially the Board of Trustees of SUNY who went to the state Supreme Court to challenge the Regents' authority to terminate the English and history doctoral programs at the Albany campus. The case was resolved in 1977 in favor of the Regents' action to terminate.

While program review as conducted by the Regents was not specifically tied to budgetary considerations, neither was it unrelated. Both the state in general and the public university system were undergoing a financial crisis of the first magnitude during the period.

Senior institutions in the SUNY system were also conducting program reviews during this period of retrenchment in New York. Emmett B. Fields who assumed the presidency of SUNY-Albany in 1975 (now president of Vanderbilt) talked to a group of Southern legislators about the impact of that retrenchment on his institution and the use of program review to carry it out.[7]

Fields noted that when the executive budget was published for 1976-77, SUNY-Albany found that it was scheduled to lose 118 positions and nearly $1.8 million from its base budget of $44 million. (The budget had been reduced by $1.2 million the previous year.) The institution was faced with a double problem. Not only was it necessary to make these mandated cuts, but long-term planning meant that additional funds would need to be freed to enhance other programs.

An administrative and faculty task force was able, within a month's time, to put together a plan which not only managed the mandatory cuts but freed additional resources for program enhancement. The task force established a system of program priorities, using five criteria: 1) program quality; 2) centrality — the degree to which a program represented a basic and traditional discipline; 3) potential for the program to "address policy issues," a mission which the institution had recently adopted as its new direction; 4) student demand; and 5) cost.

The Task Force recommended to the Commissioner that 20 degree programs be terminated at SUNY-Albany. Included were

eight bachelor's programs, the elimination of several whole departments, and the entire School of Nursing. In all, about a sixth of the institution's program offerings were eliminated. In addition, a number of administrative offices were recommended for termination, reorganization or reduction of personnel.

The recommendations were accepted by both the Chancellor and the Board of Trustees of SUNY. The legislature passed the Executive Budget with one adjustment.

SUNY-Albany was able to respond so quickly and effectively to financial retrenchment because of a program review initiated and ongoing since 1970. Ninety-four separate evaluations had been conducted. Through a system of external peer review and the development of a sophisticated data base, the institution had managed to arrange its priorities and respond to budget cuts. The institution notes, however, that it was its own review, not the Regents', which allowed for the quick response.

Louisiana

The Louisiana Board of Regents, successor to the Louisiana Coordinating Council, was created in 1974. It serves as the statewide coordinating agency for postsecondary education. While its name implies central governance, institutions are actually managed by three constitutionally-mandated governing boards. The Board of Regents, however, holds constitutional authority for planning and coordination, and all proposed and existing degree programs are subject to Board approval.

The Board of Regents chose to exercise its power to review existing programs within the first year of its existence. The problem of duplication of doctoral programs was viewed as especially acute. Louisiana, by 1975, had distributed doctoral education among seven different public institutions, in addition to the doctoral programs at independent Tulane, and was facing aspirations for doctoral education from other institutions as well. Planners compared their state in this respect to other Southern states of similar size and resources which had only one, two or three doctoral granting schools.

Motivations to initiate the review were a mixture of concern over cost and efficiency, the employment market for graduates, and the quality of the programs. Initially, however, questions of cost and need appeared to dominate the thinking of the Board. Planning for the review of doctoral programs was done by the staff of the Board of Regents. Time was a critical factor — the staff had set a goal of completing the review of all doctoral programs in the state by the spring of 1976. Borrowing heavily from the few states which had undertaken qualitative reviews (especially New York), the staff put

together a review process which began with the duplicated programs and then moved on to the unduplicated ones. Institutions completed "self-study" reports for each of their programs by providing data on a number of program elements, including structure, student characteristics, personnel, curriculum, facilities, library resources and finances. The qualitative evaluation was conducted by visiting teams of consultants from outside the state. The teams evaluated all of the doctoral programs in Louisiana in their respective fields.

Consultants were selected by contacting the national professional associations and submitting lists of names to the institutions for their additions and deletions. After examining the self-study reports and making one-day campus visits, consultants submitted written reports to the Board and the institutions, who were asked to respond. As evaluations were received, the Regents held public hearings, reviewed staff recommendations and then took action.

Review teams completed the last evaluation in March, 1978. Despite missing their somewhat unrealistic deadline, the Board carried out a large undertaking in a surprisingly short period of time. The Board by the end of 1977 had made decisions on a total of 76 separate doctoral programs in the state (programs at Tulane were also reviewed but no action was taken on these reports). Another score of programs await decision, pending reports from the review teams. The tally, thus far, is 20 terminations, 48 programs to be "maintained and strengthened," and eight programs awarded a special commendation of excellence.

None of the institutions escaped the Regents' review without at least one of its doctoral programs being terminated. However, there exist stark contrasts in the views of institutions regarding program review in Louisiana. Institutional perspectives of the process are influenced by their view of the outcomes. This difference of opinion exists within single institutions as well, depending strongly on the impact of the review on the individual's own department or unit. More important, the impact of the Regents' review beyond the immediate outcomes of termination or commendation was considerably different from institution to institution.

LSU-Baton Rouge, which as a whole views the Regents' review in positive terms, finds its position in the state greatly strengthened. While the institution lost a doctoral program in political science, saw its Ph.D. programs in business consolidated, and suffered strong criticism of its education programs, it also had programs commended, some of which the consultants proclaimed as among the best in the country.

For some of the regional institutions, the impact of the terminations and their response to the evaluation has been more negative. The review has meant not only program terminations but broader

implications for the character of these institutions and their aspirations for the future. McNeese State University in Lake Charles lost all of its doctoral programs when its education programs were terminated. Northeast Louisiana University in Monroe, which also lost its education doctorates, was left with only the doctor of pharmacy degree. At Louisiana Tech University in Ruston, where programs in economics and mathematics were terminated, the institution was left with doctorates in engineering and business administration.

Without any of their programs being commended for excellence, these institutions had little to alleviate the sting of criticism brought about from terminations. The public nature of the review process and its reporting in the state and national press added to the sense of injury felt by some personnel in these institutions.

Institutional Impact

Let us examine more closely the institutional impact of the Regents' review at two institutions in the state — LSU-Baton Rouge, the state's only comprehensive university, which underwent 48 separate doctoral reviews; and Northeast Louisiana University in Monroe, a regional institution and newcomer to doctoral education which had doctoral programs evaluated in its College of Education and pharmacy program.[8]

The sheer number of doctoral programs reviewed at LSU-Baton Rouge meant that the extensiveness of the review process was considerably greater than in any other Louisiana institution. During some periods, consulting teams were visiting the campus at the rate of one per week, an intense and time-consuming experience for the individuals involved.

The effect of the review went well beyond the specific actions taken by the Board and reported in the press. Administrators and deans at LSU reported a variety of impacts on curriculum, tenure decisions, allocation of funds and general quality of doctoral programs. Efficiency and concern over duplicative programs may have been the spur to start the review, but the nature of the process itself quickly changed the focus. External consultants, after all, are drawn from the disciplines they are charged with evaluating. Their focus at LSU, while not excluding productivity and need factors, was more on the qualitative aspects of graduate education.

Cost saving has not been one of the outcomes of the review, however. As one administrative officer put it, "You save money by terminating people, not programs." In political science, where a doctoral program was terminated, the master's program remains and the institution has chosen to strengthen the program and to

submit a new proposal. The programs terminated in the business school were actually consolidations, with no change in enrollment or resources.

This lack of cost saving does not diminish the review's impact. Program review at LSU undoubtedly served as a catalyst for a great deal of internal change in the institution. In some cases, the reports of the consultants confirmed the findings of institutional reviews of the past and provided the necessary leverage to administrative officers to carry out the reform. An internal review conducted by the institution had concluded, for example, that four doctoral programs in business should be consolidated, offering one doctoral degree instead of separate degrees from each of the departments of management, finance, marketing and quantitative methods. These consolidations did not limit program availability — separate departments still exist. Administrators believe, however, they are more cooperative and integrative in their efforts.

Internal reallocation appears to be an inevitable outcome of the review process, even when terminations do not take place. When review reports are released they indicate both the strong and the weak. This creates political pressures for reallocation of resources which the institution may find difficult to contradict.

While the rapidity of the process caused problems for LSU, it did provide deans with the advantage of having an evaluation of all their programs at the same point in time. They now had some basis to judge the relative value of competing demands among their departments. Deans, one respondent noted, are always in a position of evaluating requests for additional resources outside their own areas of expertise. While administrators implied that reallocation took place as the result of the consultants' reports, they were also quick to note the minimum degree of such reallocation because of the small degree of flexibility allowed in the institutional budget.

The consultants' reports do not provide much help, however, in answering the question of whether to reward the strong or to strengthen the weak. In all the program evaluations conducted at LSU, consultants concluded that programs were underfunded. Even the geography program, proclaimed as superior, was said to be underfunded.

Review at LSU also stimulated a number of personnel changes. The added emphasis that the review brought to questions of quality made a definite impact, administrators and deans believe, on the quality of tenure recommendations made by faculty and department chairmen. Standards for tenure had become distinctly tighter. Three of the institution's deans had been replaced during the review period, a change that one senior level administrator felt was related to the added emphasis on quality. In the College of Education, a

new dean had been appointed in the summer of 1976, as the external review began; in addition, the school had also changed its personnel policies as the result of the consultants' report (which supported conclusions made by previous reviews that had been ignored). Qualifications for membership on the graduate faculty were strengthened and some faculty were relieved of this responsibility. In other schools and departments, a few faculty members were encouraged to retire early.

One senior academic administrator believed that the most positive impact of the review was closely related to this question of quality. The faculty of the institution had forgotten their accountability to their peers — as he phrased it, "their membership in a national community of competence." While accountability to the state may have been the motivation for initiating the review, it is accountability to ers and the discipline which dominated the outcomes.

Cooperation, a persistent theme of the consultants' reports, was also affirmed by mandates from the Board of Regents to LSU. The College of Business Administration was charged with seeking ways of enhancing cooperative efforts with Tulane's business program in New Orleans. One dean noted, however, great faculty resistance to arrangements which call for travel back and forth between two institutions. Cooperation costs money, he cautioned, something the Regents had not provided when they urged this approach.

A mandate for a consortium arrangement for doctoral programs in education was also issued by the Board of Regents. The consulting team which reviewed education doctorates found all five programs in the state lacking on qualitative measures and recommended that only two of the programs — those at LSU-Baton Rouge and at the University of New Orleans — be retained. They also suggested that a consortium arrangement be formed. The Board of Regents, which as a rule had closely followed the consultant recommendations, chose not to terminate the education programs at Northwestern State University in Natchitoches, while letting stand the recommendations to phase out operations at Northeast Louisiana and McNeese State Universities. This decision to vary from the consultant's reports, as we shall see, was hotly contested by Northeast, which claimed that other criteria besides quality were behind the decision to terminate its programs and allow Northwestern's programs to continue.

As for the impact on LSU's education program, it was by no means minimized by the fact that termination was avoided. The openly conducted program review generated a great deal of interest in the press in the area of education (and surprisingly little interest in other areas). Public hearings were held and the consultants' reports, unlike in the New York review, were made available to the

public and press. While the report on education at LSU was "graceful," in the words of one dean, it nevertheless was also "condemning." The criticism of education programs in general also greatly affected LSU. Wide publicity and an ensuing public loss of confidence is still felt within the institution. Faculty within the College of Education at LSU are reported to be polarized, with the old guard remaining passive or resentful about the outcomes of the review and the new faculty hired since the coming of the new dean anxious to leave the stigma of the past behind.

As for the consortium, which is to include LSU, the University of New Orleans and Northwestern, its future is uncertain. While an elaborate plan for resource sharing has been put together on paper, the operational details appear unclear to those involved. The consortium, which is still in the study stage, was devised as a vehicle for further eliminating duplication which exists among the three institutions. Instead of being directed by the Board, the institutions are being asked to divide up the specialization pie among themselves. Whether they will be able to do so is problematical, says one administrator at LSU.

The impact of the Regents' review at Northeast was considerably different than at LSU-Baton Rouge. The reaction to the decision to terminate all of the institution's doctoral programs in education has been overwhelmingly negative from staff in the affected programs and from institutional administrators. To Northeast, any benefits of evaluation, if they exist, are obscured by a perception of long-term negative consequences from the terminations. Opposition raised by the event has yet to subside — more than two years after the visit of the evaluation team.

The institution believes the Regents had a "prior agenda" which mandated termination of doctoral programs at the regional institutions and prevented objective qualitative evaluations of their programs. The visiting team of consultants, they asserted, were also biased against regional universities, and the result was a review which was flawed in fact and judgment; the consultants and the Regents did not believe that quality doctoral education could be conducted at this type of institution. In recommending that the education programs at Northeast be terminated, the visiting team cited its lack of "potential" for developing into a nationally recognized program and recommended that the LSU and University of New Orleans programs be retained "not because they now have the best programs, but because they have the potential for developing good programs."[9]

Beyond the criticism of the consultants' reports, Northeast reacted strongly to the Regents' decision to maintain the program at Northwestern, while letting stand the recommendations on its

programs. If an education doctorate was to be kept in the northern part of the state, which the Regents had concluded was necessary, then both the objective data and the visiting team's evaluation, the institution believed, supported placing it at Northeast. The Regents let their decision stand, however, citing Northwestern's origins as the former Louisiana Normal school and a long history of teacher training.

The major impact of the Regents' review on Northeast, as well as on some of the other regional institutions, has been an acute sense of declining prestige and fear for the future. The institution sees the possibility of other graduate programs being threatened, as the Regents embark on their second series of reviews — of master's programs. There is fear, if not yet reality, that research-oriented faculty will leave the institution and affect the quality of other graduate programs.

In the College of Education, two faculty members have left the institution — both high quality, research-oriented faculty. One, an administrator noted, was hired by the College of Education at LSU. As for the immediate future, no new hiring is planned, with vacancies from resignations and retirements filled in-house.

Recovering from the pain of termination and finding a new direction is the challenge facing faculty and administrators of Northeast. The Regents' new Master Plan which calls upon Northeast and other regionals to develop a wider range of two-year programs (the state has no public community college system) has not yet filled the void left by the aftermath of doctoral program review.

CONCLUSION

The description and analysis of program review in the states examined — Virginia, Tennessee, Florida, Kentucky, New York and Louisiana — provide the base for offering some qualified answers to questions about the purposes and impact of program review.

Can manpower projections be applied to the program review process?

This is the most central question to be asked about program review in light of the projections of substantial supply and demand imbalances discussed in Chapter 1.

The answer is a qualified yes. Projections of the declining need for new faculty strongly support the argument for doctoral program review and the necessity of establishing priorities,

especially when coupled with the prospects of fiscal retrenchment. The severity of the problem suggests that some segments of higher education could undergo substantial cutbacks in the number of graduate programs without overreacting to these supply-demand imbalances. While global projections, such as those in Chapter 1, provide a context for general review of doctoral programs, the projections of the National Science Foundation, the Bureau of Labor Statistics, the Modern Language Association and others point to specific troubled disciplines.

The ability of decision makers to use specific manpower studies as operational criteria is limited, however. There are other important outcomes of education and broader definitions of need than merely the employment success of graduates. Further, there are political problems in employing manpower or need criteria. For areas where broad consensus exists that too many programs are producing too many unneeded graduates, need criteria can be effectively employed. This is more likely to be the case in professional areas where there is a closer correspondence between the particular degree and specific jobs.

Need criteria were employed with education programs in Louisiana, but were not used in evaluating arts and science programs. By stressing qualitative criteria with these programs, the Regents diffused a great deal of opposition to their review. Who could disagree with quality? asked an LSU dean. The "need" for LSU's political science doctorate would have been hotly contested, however, on grounds unrelated to the employment of graduates. The use of outside consultants may inadvertently, yet inevitably, switch the focus to qualitative concerns and away from manpower and efficiency criteria. Despite initiation and supervision of a review by a state agency, much, in terms of control, may be relinquished to the consultants. Boards can make decisions contrary to consultants' reports, but this raises opposition and leaves the agency open to criticisms of "political" maneuvering. If agencies have closely analyzed existing manpower studies or conducted their own, this opposition can be countered with data. Further, decisions made solely on the basis of quality become difficult without some conception of need. If programs are low in quality, are they to be terminated or strengthened? Need, in this case, can be the decisive factor.

While better "needs assessment" by state planning agencies will assist evaluators and decision-makers in program review, there will continue to be disputes about the importance of manpower information, especially in the traditional arts and science areas. Even in cases where wide consensus exists that supply greatly exceeds demand, faculty and institutions will argue for a wider

definition of need. State planners and manpower planners tend to place much greater emphasis on the job market than academicians, who may see the employment of graduates as a poor second or third on their list of important academic outcomes.

Is program review a cost-cutting measure?

Probably not, if we are considering immediate cost savings. Louisiana, for example, assured its institutions that, for a five-year period after termination of a program, the institution would suffer no budgetary cuts as the result of termination and subsequent loss of enrollment. While this provision comforted the institutions, in some cases it may have been unnecessary. Northeast, for example, expected no immediate drop in enrollment as a result of terminations. Doctoral students already enrolled may continue, and the institution expects a shift to education specialist degree programs by those who formerly would have enrolled in doctoral programs.

States which use only measures of degree output to evaluate program adequacy may often limit their review to programs which are already low cost. The most likely place to find savings is in programs with high levels of enrollment and degree production, which quantitative evaluations exclude. Further, formulas based on enrollment provide no incentive for the maintenance of high cost, low enrollment programs, although institutions can choose to ignore the formula. This is most often done with programs which are viewed as central to the institution's mission, regardless of student enrollment.

In cases where low-producing programs do have high per student costs but low total costs (a few faculty teaching even fewer students), then terminating the program effects few "savings." If, on the other hand, the program is using substantial resources for a few students, savings are possible. These savings, however, are seldom "retired." Faculty are shifted to other programs — from the doctoral to the master's level, for example — or as they leave the institution, budget lines are transferred to other departments.

The New York experience, however, is evidence that program review can be used as a cost-cutting tool when the cuts are mandated by the state. Instead of applying across-the-board cuts, which have been the traditional way of responding to fiscal retrenchment, SUNY-Albany used program review as a priority setting device to determine cuts. The terminations in this case were extensive enough to eliminate whole departments and schools (as opposed to programs) and thus effect real savings. Clearly, program review is a rational way to respond to hard times.

Even outside the context of mandated savings, program review in the long term can be viewed as a "savings" effort. Evaluation which eliminates unnecessary duplication and limits the aspirations of institutions has the potential, if not for cutting costs, at least of slowing the rate of growth. Combined with planning which specifies institutional missions, program review provides needed information to make decisions about new proposals. Questions about the need for and the strength of existing graduate programs are critical to decisions on new proposals.

Can program review improve efficiency and increase productivity?

Efficiency and productivity can be increased, even though cost savings are not realized. Priority setting, the principal outcome of a qualitative review, provides an excellent rationale for internal reallocation. Further, increases in qualitative productivity are the presumed — if not measured — outcomes of the changes which consultants recommend. Those recommended changes usually mean, however, increases in resources for the program through reduced teaching loads and smaller and more specialized classes.

While institutions will use evaluations which call for more funding to argue publicly for greater resources, their administrators will admit privately to the great stimulus which the review process alone provides for increased faculty productivity. Those praised are motivated to reach even greater heights, while those criticized can be stimulated to increase productivity without additional resources. The fact that programs which evaluators can rate as "best in the country" can also be proclaimed as underfunded is clear evidence that high productivity can be achieved, to some degree, independent of resources.

Qualitative evaluations are handicapped by the lack of knowledge of outcomes, especially as related to graduates. Consultants are limited by the outcome measurements available and may be interested only superficially in such measures. What they are often interested in are programs which have high levels of resources, many faculty amenities, such as low teaching loads, and special "graduate" status. They are also attracted to programs which are similar to their own, a bias which greatly distresses regional universities, since consultants are usually drawn from large prestigious institutions. Consultants may tend to stress research over teaching and practical experience, even when the degree being evaluated is a professional one. They may begin with a skepticism that quality doctoral instruction cannot take place outside large institutions with long histories of graduate work.

Even if there are questions about limiting doctoral education to a few "flagship" institutions on qualitative grounds, strong arguments remain for such action on efficiency grounds. Acquiring doctoral programs is like eating peanuts — institutions have a hard time stopping with just one! The consistent pattern in many institutions across many states has been to use the establishment of one doctoral program as a rationale for additional ones. The context of the times and the projections of the future suggest that this narrow conception of institutional growth does not respond to the changing needs of academe or society.

NOTES

1. State Council of Higher Education for Virginia, "The Quantitative Evaluation of Degree Programs," undated memorandum of the Council.

2. Tennessee Higher Education Commission, "Report on 1977 Studies of Low-Producing Programs." Staff report, January 1978, p. 8.

3. For further discussion of Florida's experience, see Robert J. Barak and Robert O. Berdahl, *State-Level Academic Program Review in Higher Education*. Inservice Education Program Report 107. Education Commission of the States, February 1978, pp. 60-65.

4. Panel members were Paul L. Dressel (Michigan State University), Frank E. Horton (Southern Illinois University, Carbondale), Everett Walters (University of Missouri-St. Louis) and Daniel J. Zaffarano (Iowa State University).

5. Kentucky Council on Public Higher Education, "Review of Doctoral Programs in Kentucky." A report prepared by The Graduate Program Review Panel, December 29, 1976.

6. Barak and Berdahl, *op. cit.*, pp. 58-60.

7. Emmett B. Fields, "Program Review," in *Will Higher Education Be Ready for the Eighties?* 25th SREB Legislative Work Conference: July, 1976. Atlanta: Southern Regional Education Board, 1976.

8. Interviews were conducted in March 1978 with faculty and administrators at LSU-Baton Rouge, Northeast, and staff of the Board of Regents. Visiting team reports on the education programs and the institutional responses to these reports were also examined.

9. "Review of Doctoral Programs in Education," Report of the Visiting Team to the Louisiana Board of Regents, August 31, 1976.

APPENDIX

ENROLLMENT ASSUMPTIONS ON WHICH THE DEMAND PROJECTIONS ARE BASED

Enrollment forces and replacement needs may be considered as the two basic determinants of demand for new faculty.

The projections in Tables 1, 2 and 3 were based on National Center for Education Statistics (NCES) high, low and intermediate estimates and projections of total full-time-equivalent (FTE) faculty in the United States through 1986.[1] To project the South's total FTE faculty needs, its percentage share of total FTE faculty in the United States over the next ten years was estimated from the NCES salary and tenure report of full-time instructional faculty for 1975,[2] after two adjustments were made.

First, changes in the South's share of FTE faculty were estimated, based on SREB's projections that, between 1976 and 1986, the region's share of total headcount enrollment will increase by one percent — from 25.6 to 26.7. For each of the three projections, this increase was added evenly each year from 1976 through 1986 to the South's share of total FTE faculty in 1975.

The second adjustment to the South's 1975 base share of the nation's total FTE faculty concerns changes in the student-faculty ratio. We know that the South has a lower student-faculty ratio, compared to the nation as a whole. Further, there is some evidence that the difference has widened since 1972.[3] The high and intermediate sets of projections assume that the South will maintain a ratio lower than the nation's through 1986. In this case, there is no additional effect on the region's share of FTE faculty.

The low set of projections, however, assumes that the gap will narrow through 1986, as the South's student-faculty ratio increases and becomes similar to the nation's. Application of the increased student-faculty ratio lessens the growth in the South's share of total FTE faculty through 1986.

There are several reasons for possible changes in student-faculty ratio. First, this ratio historically has increased in times of enrollment stability or decline, and decreased when enrollments were increasing. Second, the problems of inflation, recession and resulting budgetary constraints on institutions may be expected to increase the student-faculty ratio as administrators try to "make do" with fewer real resources. Further, the enrollment projections include an increase in lower division vocational and nondegree students and greater numbers of part-time students, all of which are related to the expected growth of the two-year sector in higher education. Since student-faculty ratios are usually lower in these kinds of instruction, the changing enrollment mix is likely to lead to higher overall ratios in the 1980's. For the low set of projections, it is assumed that these changes will operate more forcefully in the South than in the nation.

REPLACEMENT FACTORS ON WHICH THE DEMAND PROJECTIONS ARE BASED

The second major question determining the demand for new faculty concerns how many faculty will have to be hired each year to replace those lost through attrition. The three major sources of faculty attrition in colleges and universities are death, retirement, or leaving for non-academic employment. In projecting the demand for new faculty, the following assumptions were made for each of the replacement variables.

Death and Retirement

Death and retirement rates can be projected by reference to the future age distributions of faculty. Similar age distributions were assumed for faculty in the nation and in the South. While there is some reason to believe that faculty in the region may be younger on the average, due to the more recent growth of Southern higher education compared to the nation, no data were found to substantiate this possibility. Besides, the differences, which would lead to smaller death and retirement rates for the region, would most likely be slight, since the South has been drawing on the same sources of faculty as the nation for some time now.

In projecting death and retirement rates for faculty, Allan Cartter pointed out that the period of rapid growth in the 1960s resulted in a severely skewed age distribution of faculty. According to 1972-73 data from the American Council of Education, by 1972, 42.2 percent of full-time college teachers were 40 years old or younger, while only 15.9 percent were between 55 and 70.[4] Had the period leading up to and including 1972 been more stable in terms of enrollment and related faculty growth, it has been estimated that the percentages would be 37 and 24, respectively. Thus, because of the rapid growth rate over the period from the 1960s through the early 1970s, the age distribution of college faculty is skewed toward the younger end, with the median age today about seven to eight years younger than it would have been under more stable past conditions. Under such circumstances, the current death and retirement rate would be at 1.8 percent with a median age of 45. Instead the rate is estimated at 1.4, with the median age of faculty at 40.[5]

The larger proportion of younger faculty means that the death and retirement rates have been decreasing slightly since the early 1970s. The combined rate for death and retirement in 1972 was approximately 1.6 percent of total full-time faculty.[6] Assuming stable rates at which faculty leave academe for other employment, the current 1.4 rate may continue until around 1982, when it will begin a rise to about 1.6 percent by 1986.

These estimates also assume no radical change in the retirement policies of higher education — an issue which will gain in importance as 1982 approaches and the new federal law prohibiting mandatory retirement before the age of 70 becomes applicable to tenured faculty in higher education. The estimates assume away the reverse possibility that there will be a significant movement toward early retirement. While this is the case nationwide and throughout many sectors of the economy, there is much reason to believe that higher education is different. Given its emphasis on intellectual and less physically demanding activity, faculty may choose early retirement less frequently. On balance, therefore, the death and retirement rate estimates are assumed to be 1.5 percent of total faculty throughout the period from 1975 to 1986.

These estimates are applied to all three sets of projections, given the likelihood that the age distribution and retirement wishes of faculty will not have time to change much by 1986.

Departure From Academic Employment

The second major kind of replacement factor concerns faculty who leave higher education for employment in other sectors of the economy, such as government, business, industry, elementary or

secondary education. Reasons for leaving are both voluntary and involuntary. In the past, most departures have been voluntary. But, as faculty positions become more scarce and the competition for them intensifies, and as administrators attempt to build some flexibility into their faculty staffing patterns, the rate at which faculty leave involuntarily may increase.

It may be expected that, of the faculty who do leave involuntarily, a greater proportion will be joining other sectors of employment. In the past, when the supply-demand situation for faculty was more favorable, faculty who involuntarily left an institution would likely find a position at another institution. As the future market for faculty becomes much tighter, this option will diminish.

As stated above, most of those faculty who leave higher education for other economic sectors do so voluntarily, not only for better salary, but also for a variety of other reasons. In the past, the estimates of senior faculty who have left higher education for other employment have fluctuated at 7 percent during 1945-1950, 5 percent during 1950-55, 3.5 percent from 1955 to 1960, and 3.4 percent from 1960 to 1963.[7] From 1963 through the late 1960s it is likely the leaving rate did not go above 3 percent and possibly averaged between 2 and 2.5 percent. By the early 1970s, however, the outflow rate had probably started to stabilize and increase again, only to be pulled down once more by the economic recession and its dampening effects on alternate employment sectors.

It seems that there is a clear association between outflow rate and academic and non-academic salaries. The observation of past periods shows that outflow increases when non-academic salaries are more attractive than those in academe. This historical sensitivity of faculty migration to relative salaries may be expected to continue through the 1980s.

Because of the substantial surpluses of available faculty over the number of available positions, academic salaries are likely to remain stable in constant dollars, but decrease somewhat in relation to salaries in other economic sectors. While the decline in relative faculty salaries does have a basis in the past, and while its direct effect will be to increase the rate at which senior faculty leave academe for other sectors, the degree to which faculty will leave will depend also on the economic health of the non-academic sectors. Should the economy prosper, the relative salaries paid to academics will decline even more and further increase the outflow rate. Should the economy continue to lag through the 1980s, senior faculty might very well opt to stay in academe, even with their static salaries. This is due to the feeling that academe offers benefits which go beyond mere pecuniary rewards, such as pleasant

working conditions, freedom, opportunity for consulting, collegiality, and greater prestige as well as capitalizing on the investment made in the academic career. Therefore, it is likely that, for the outflow rate of senior faculty to increase markedly in the future, there will have to be evidence of clear and substantial differences in academic salaries relative to other sectors of the economy. If these differences do become clear, it is likely that more faculty will choose to leave higher education for non-academic employment.

In deciding on the value for the leaving rate of senior faculty through the 1980s, most weight was given to the recent period, 1970 to 1975. It has been felt by experts, such as Allan Cartter, that the outflow rate during this time stabilized and perhaps started to decrease because of the economic recession and its effects on the non-academic employment sectors. Assuming that the present outflow rate is about 2 percent, a low estimate would be for this rate to remain at this level during the period from 1978 through 1986. Should the economy recover significantly, the outflow might go as high as 3 to 3.5 percent.

Replacement Demand for New Faculty

The total number of positions available for new faculty to replace previous faculty who have died, retired, or left higher education for other employment results from combining the death and retirement with the leaving rates. While the same rate for replacement due to death or retirement is assumed for both the high and the low sets of projections, different values are assumed for the outflow rates. In the low projections a rate of 2 percent is used, which represents no change over the present estimated rate through 1986. For the high and intermediate projections, a rate of 3 percent is applied, which is an increase of a full percentage point over the ten-year period between now and 1986. The combination of the two kinds of replacement rates yields an overall rate of 3.5 percent for the low set of projections and 4.5 percent for the high and intermediate sets, these percentages to be applied to the previous year's total faculty to get number of new faculty needed for replacement purposes.

COMPONENTS OF THE DEMAND PROJECTIONS

Total Demand for the New Faculty

The major focus of the demand projections lies in the demand for new junior faculty or for those potential faculty who are to be hired directly upon earning a doctorate. Total demand for new

faculty includes demand, not only for faculty who have just left programs of preparation, but also for potential faculty from other employment sectors. It should be noted that, especially in a time of excess supply of faculty over the demand for them, a third sector might be included in the demand considerations — that is, the demand for holders of the doctorate who have fir[illegible] their graduate education and have not been employed for at least a year in any economic sector. Holders of the doctorate who are prepared for academic employment b[illegible]t not able to find placement for at least one year and who have not taken jobs in other employment areas are felt to be few in number. While many will not find faculty positions within a year after completing graduate schoo[illegible] it is expected that most will find and accept non-academic jobs.

Demand For New Faculty With A Recent Doctorate

As the tables show, there is a second dimension of the demand picture for new faculty. In addition to the need for people to fill positions from within and outside the academe, there is also the consideration of what proportion of those demanded will have recently earned a doctorate. Because a major focus of these projections is on how the declining demand will relate to the yearly supply of new doctorates recently leaving graduate programs, it should be noted that this component does not include new faculty at the doctoral level to be hired from non-academic employment sectors. Trend information shows that the percentage of new faculty hired with a recently earned doctorate has risen in the 1970s from below 50 percent to where it now may exceed 55 percent.[8]

In the face of the increasing availability of new doctorate holders, compared to available academic positions for them, the percent of those new faculty who are hired with a recently earned doctorate may increase even more. However, there are upper limits to this increase, in that disciplines vary as to the kind and level of preparation required or preferred. Some disciplines are approaching the point at which nearly all of their faculty will have the doctorate; other disciplines, especially the more vocationally-oriented fields, will not find it feasible or educationally sound to employ faculty with the doctorate.

Related to interdisciplinary differences in employment of new faculty with the doctorate are inter-institutional variations in this practice. The most obvious variation is at the two-year level, with its greater vocational emphasis, where the proportion of faculty with the doctorate has been 30 to 35 percentage points lower than

at four-year institutions.[9] Therefore, projecting what proportion of new faculty will have the doctorate in the future depends on what disciplines and institutions students will enter in the years ahead. Most projections of enrollment through the 1980s see an increase in the two-year sector, along with growing proportions of part-time, more vocationally-oriented students — trends that would likely limit the overall growth in the percent of new faculty hired with a fresh Ph.D.

Given this reasoning, it is possible that the percentage of new faculty with a new doctorate would increase from the assumed current 57 percent level in the face of the tremendous surplus expected through the 1980s, but that an upper bound would be at around 67 percent. The high and intermediate projections assume that the proportion to be hired with the doctorate will increase evenly between 1976 and 1986, from 57 percent to 67 percent. The low projections include the assumption that the percentage will not increase but remain at its present estimated 57 percent through 1986.

Summary of the Demand Projections

For the high set of projections (Table 1) FTE enrollment is assumed to grow by 19 percent between 1976 and 1986. The South's student-faculty ratio is assumed to increase only slightly, as the difference between the nation's and the region's is held constant. On the replacement side of the demand for new faculty, the high projections are based on a 4.5 percent replacement rate. The proportion of new doctoral level faculty to be hired is assumed to increase from 57 percent to 67 percent.

The low set of projections (Table 2) is tied to an FTE enrollment that is projected to decline by nearly 5 percent between 1976 and 1986. The student-faculty ratio is assumed to increase at a rate greater than the nation's, a narrowing of the present gap between the United States and the South. The replacement rate is assumed to remain at its present value of 57 percent of total new faculty demanded.

The intermediate projections are based on enrollment estimates resulting in a 12 percent increase from 1976 to 1986 in the South. The assumptions for the student-faculty ratios, replacement rate, and proportion of new faculty with a recent doctorate are the same as those used in the high set.

The actual projections show a difference of up to 6,000 FTE positions for each year, when one compares the high and the low projections.

In the period from 1963 to 1970 the estimated average annual demand for all new faculty in the South approached 12,000. For faculty with recent doctorates the demand was about 6,000. These

[illegible] averages compare to projected annual averages for the [illegible] period of a high demand of 8,000 to a low of 2,300 for all new faculty from all employment sectors. The intermediate annual average is 6,700. For faculty with a recent doctorate, the high demand is projected to average about 5,200 from 1981 through 1986, the low demand around 1,300 per year and the intermediate approximately 4,300. In comparing 1963-1970 to 1981-86, the average annual demand for faculty with new doctorates is lower by 13, 78 and 28 percent, according to whether the high, low or intermediate projections are used.

LIMITATIONS OF THE PROJECTIONS

Regional Competition

There is an added factor which should be included in assessing the supply-demand situation in the South through the next ten years. Not only will the surpluses of doctorates from other regions be looking to the South as the last growing frontier of academic employment, but they may be more likely to get the jobs and squeeze out those who have received doctorates from Southern institutions. The reasoning for this assumption is based in Cartter's finding that, during a period of greater supply, a process is started in which the higher quality Ph.D.'s move into positions once thought to be of less prestige. In effect, a kind of "bumping" action occurs in which Ph.D.'s from the better institutions across the nation begin to be hired by all levels of institutions. This process pushes out lesser quality faculty or potential faculty, and favors regions that have highest quality graduate programs. While the South may be nearing parity with other regions in the quality of many of its graduate pro[illegible] the general outlook is that the region will still be at some [illegible]age as its new Ph.D.'s begin to compete vigorously wit[illegible]terparts from other regions. The effect could represent a greater surplus of new doctorates over the demand for them when one looks at the South in the context of the entire United States rather than in isolation.

Cumulative Supply

By not dealing specifically with the probability that, in any single year, many Ph.D.'s who have received their degrees in the past will still be looking for faculty jobs, we may have underestimated the real surplus in the supply of doctorates over the demand. The supply of doctorates may be expected to increase each year as we move through the Eighties, not only due to increases in the number

of new degrees granted each year, but also due to the accumulation of doctorates from past years who have not yet found suitable academic jobs. Thus, the surpluses in both the high and the low projections tend to be underestimated in that the supply estimates on which they are based include only people who have earned doctorates in that specific year.

This is not to say that all new Ph.D.'s want to become faculty and that they feel underemployed in a different sector of the economy. What will be happening to an increasing extent is that the percent of new Ph.D.'s who go into academe will decrease. From a high of nearly 70 percent in the early 1970s, the proportion of new doctorate recipients employed in academic jobs may drop to 35 or 40 percent by the late 1970s and to less than 20 percent by the mid 1980s.[10] These increasingly large surpluses affect not only the new degree-holders looking for an academic job in their year of graduation but also new degree-holders of subsequent years.

The question of how surplus doctorates can be channelled to non-academic employment sectors, such as research and development in government, business, and industry is considered in Chapter 3 of this publication. It should be noted that even accounting for these other employment sectors which promise to take up much more of the slack in the future does not eliminate the potential surplus of supply over demand for Ph.D.'s. Both the National Science Foundation and the Bureau of Labor Statistics project Ph.D. surpluses in the range of 20 to 40 percent over demand by 1985.[11] These projections include all demand, both academic and non-academic, which is related to the traditional employment of doctorates.

NOTES

1. National Center for Education Statistics, *Projections of Educational Statistics*, prepublication data, 1978.

2. National Center for Education Statistics, *Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1975-76*, 1977.

3. National Center for Education Statistics, *Fall Enrollment in Higher Education*, 1972 and 1975 editions; *Numbers of Employees in Institutions of Higher Education, 1972, 1973*; and *Salaries, Tenure and Fringe Benefits of Full-Time Instructional Faculty in Institutions of Higher Education, 1975-76*, 1977.

4. Alan Bayer, *Teaching Faculty in Academe, 1972-73*, research reports vol. 8, no. 2, American Council on Education, Washington, D.C.

5. Allan Cartter, *Ph.D.'s and the Academic Labor Market*, New York: McGraw-Hill Book Company, 1976, pp. 159, 173.

6. *Ibid.*, pp. 173, 180.

7. Richard Freeman, *The Market for College-Trained Manpower*, Cambridge: Harvard University Press, 1971; Allan Cartter, *op. cit.*, p. 162.

8. Roy Radner and Leonard S. Miller, *Demand and Supply in U.S. Higher Education*, New York: McGraw-Hill Book Company, 1975, pp. 315-338.

9. *Ibid.*

10. Based on historical data from: National Research Council, *Summary Report: Doctorate Recipients from U.S. Universities*, Washington, D.C., 1967-74 editions.

11. National Science Foundation, *Projections of Science and Engineering Doctorate Supply and Utilization, 1980 and 1985*, Washington, D.C., 1975; U.S. Department of Labor, Bureau of Labor Statistics, *Ph.D. Manpower: Employment, Demand and Supply 1972-85*, Bulletin 1860, Washington, D.C., 1975.