DOCUMENT RESUME

ED 096 913 HE 005 941

AUTHOR Bowen, Howard R.; Bailey, Stephen K.
TITLE The Effective Use of Resources: Financial and Human.
INSTITUTION Association of Governing Boards of Universities and Colleges, Washington, D.C.
SPONS AGENCY Lilly Endowment, Inc., Indianapolis, Ind.
PUB DATE Oct 74
NOTE 33p.; Speeches presented at the Association of Governing Boards of Universities and Colleges National Conference on Trusteeship (New Orleans, Louisiana, April 30, 1974)
AVAILABLE FROM Association of Governing Boards of Universities and Colleges, One Dupont Circle, Suite 720, Washington, D.C. 20036 ($1.00)

EDRS PRICE MF-$0.75 HC Not Available from EDRS. PLUS POSTAGE
DESCRIPTORS *Conference Reports; Demography; *Educational Finance; *Educational Resources; Faculty; *Higher Education; Manpower Utilization; Productivity; *Resource Allocations; Speeches

ABSTRACT

Two well-known educators discuss the effective use of resources in this document. Both of these presentations were made at the Association of Governing Boards of Universities and Colleges National Conference on Trusteeship in New Orleans on April 30, 1974. The financial section begins with the demographic factors that may influence the amount of education that ought to be produced. The growth of service industries is then discussed, along with the manpower aspects of higher education. The presentation on human resources discusses measuring academic productivity stimulating growth and faculty. (Author/PG)

FINANCIAL AND HUMAN

HOWARD R. BOWEN

STEPHEN K. BAILEY

THE EFFECTIVE USE OF RESOURCES

FINANCIAL

HOWARD R. BOWEN

Chancellor, Claremont Colleges
Trustee, Grinnell College, Occidental College

HUMAN

STEPHEN K. BAILEY

Vice President, American Council on Education
Trustee, Hiram College

Presented at The A G B National Conference on Trusteeship
New Orleans, Louisiana April 30, 1974

ASSOCIATION OF GOVERNING BOARDS OF UNIVERSITIES AND COLLEGES

This publication was made possible by funds from Lilly Endowment, Inc.

One Dupont Circle, Suite 720, Washington DC 20036
(202) 296-8400
Single copies $1.00.
Printed in the United States of America
Second printing, October 1974

THE EFFECTIVE USE OF FINANCIAL RESOURCES

HOWARD R. BOWEN

Chancellor, Claremont Colleges
Trustee, Grinnell and Occidental Colleges

American higher education is at a kind of crossroads. Since the founding of the nation, its enrollments have trended upward. Its growth has resulted not only from the increase in population but also from a rising percentage of people attending. This growth culminated in an amazing burst of activity from about 1957 until 1970. During that period enrollments increased at 7½ percent a year.

Now the pace of growth has slowed, and declining enrollment is often predicted for the years ahead. In place of the buoyant optimism of the 1960's educators now talk of adjusting to the steady-state or retrenching. They are digging in for hard times and the mood is one of foreboding and risk-aversion.

The historic upward trend in enrollments was not, however, a smooth curve. The present pause is not the first one. For example, if one reviews the record since 1925, there were several such pauses. One was during the great depression, another during World War II, another in the early 1950's after the departure of the GIs. Each was traumatic and each led to a sense of discouragement and worry about the future.

The question I wish to raise is this: Are we in another temporary pause in the development of higher education which will be followed by the resumption of growth, or are we at last approaching a ceiling? The answer I think derives not from trying to predict what will happen, as though such matters are determined by factors beyond human control. The answer comes rather from analyzing what would be sound policy for America regarding the future of higher education. So I would revise the question by asking: How much higher education should be provided? Or to put it another way: What fraction of the national economic resources should in the public interest be devoted to higher education? This, it turns out, is a highly controversial issue. But I do think

the question is worth asking and the answer is not necessarily predetermined.

Some people argue today that not enough higher education is produced — that opportunity for our population should be widened and deepened. Others allege that higher education is already over-extended — that too many students are being served, that education is too lengthy, and that the nation cannot afford further expansion.

The issue is one of efficiency in the use of our national resources. In that part of the economy where the market holds sway, we do not ordinarily debate such efficiency issues. We rely on the spontaneous decisions of producers, responding to consumer choices, to allocate resources and set quantities of products. There are those who advocate that higher education should be part of the market economy. However, for a variety of good reasons, we do finance higher education primarily from public and philanthropic funds. So the question of how much higher education should be produced must be consciously considered and settled through public and philanthropic policy, not left to the market.

When I speak of higher education, I refer not alone to traditional education conducted in conventional colleges and universities, but rather to all kinds of education intended for adults, that is, for persons beyond the legal age of majority which is now 18. Some of this education will undoubtedly be conducted by institutions other than conventional colleges and universities, and some may occur without benefit of any institutions.

Let me begin by considering some demographic factors that may influence the amount of education that ought to be produced.

DEMOGRAPHIC FACTORS

Predictions of future population trends are notoriously unreliable. This is so not because demographers are inept but because human values and behavior are subject to seemingly unexplainable shifts. For example, who could have predicted the great upsurge in the birthrate after World War II or the recent sharp decline in the birthrate? The present outlook is that for the rest of the 20th century, total population will increase by about one-fifth, from about 205 million in 1970 to 264 million in 2000. But, because of the recent decline in the birthrate, the growth of the population of prime college-going age, 18 to 24, may be slower. Moreover, its growth will be intermittent. The number in the 18 to 24 age group is rising during the 1970's, will decline during the 1980's, and then rise again in the 1990's. The number in this age group, which is now around 25 million will probably be nearly 28 million by the year 2000. This would be a net increase of about 12 percent.

TABLE 1 **POPULATION ESTIMATES, 1970 - 2000**

Assuming 2.11 children born per woman

	Ages 18 - 21	*Ages 18 - 24*	*Total Population*
1970	13,076,000	22,552,000	204,879,000
1975	15,226,000	25,870,000	213,925,000
1980	15,528,000	27,367,000	224,132,000
1990	13,563,000	23,406,000	246,639,000
2000	16,163,000	27,877,000	264,435,000

SOURCE: Bureau of the Census, *Projections of School and College Enrollments 1971 to 2000*. Washington: U.S. Department of Commerce, Series P-25, No. 473, January 1972, pp. 6-9. *Statistical Abstract of the United States*, 1973, pp. 6-7.

I mentioned that the number in the 18 to 24 group is now about 25 million. Of these only about 9 million, or slightly more than a third, are in college.

Higher education enrollments are, of course, affected by many influences other than population growth. The most recent projections of enrollments for higher education in the United States were prepared by the Carnegie Commission.

TABLE 2 **ESTIMATED ENROLLMENTS IN HIGHER EDUCATION, 1970-2000**

	Number of Persons	*Full time Equivalents*
1970	8,649,000	6,764,000
1980	11,670,000	8,896,000
1990	11,402,000	8,502,000
2000	14,295,000	10,561,000

SOURCE: Carnegie Commission on Higher Education, *Priorities for Action: Final Report*. New York: McGraw-Hill Book Company, 1973, p. 103. Figures relate to opening fall enrollment, and assume considerable growth of non-traditional study.

They were prepared in 1973 to revise projections made in 1970 which had already gone out of date. According to their latest published figures, enrollment in full-time equivalent (f.t.e.) students will grow from nearly 7 million in 1970 to 10½ million in 2000, a 56 percent increase.[1]

A 56 percent increase in enrollment over 30 years, averaging about 1.5 percent a year compounded, would be tiny compared with actual enrollment growth from 1956 to 1969 which averaged 7.5 percent a

[1] The corresponding figures in number of persons are 8,649,000 for 1970 and 14,295,000 for 2000, an increase of 65 percent. This rate of increase is greater than that for f.t.e. students because the growth rate for part-time students is higher than that for full-time students. For both sets of figures, the increase would occur in two surges: one in the 1970's and the other in the 1990's with a slight decline in the 1980's.

year. However, a 56 percent growth from the very large base of 1970 would be far from negligible. It would mean that half again as much new college and university capacity would have to be put in place in the next thirty years, as existed in 1970.

Such projections, though useful, must not be taken too seriously. They rest on assumptions that may or may not prove to be valid. The demand for higher education is not independent of the supply. The number of students who will be in higher education in 2000 will be determined by a host of factors on the supply side — by the number and kinds of institutions available, by the relevancy and attractiveness of the programs they offer, by the convenience of the times and places at which education is offered, by the character of the admissions requirements, by the tuition charges, by the terms of financial aid, by arrangements for released time from work for education, and other conditions.

It has been demonstrated over and over again that students — both young and old — respond to the supply side of the market. There is not some given demand to which supply must adjust; rather demand is highly flexible and expansible depending on the kind of education offered and the terms on which it is available.

To illustrate the effect of supply on enrollment, one needs only to point out how different enrollments in American higher education would have been if there had never been a Morrill Act, or a community college movement, or a G.I. Bill. The high rate of college-going in the United States as compared with many other countries is explained almost entirely by the greater availability of *supply* in our country. So projections of enrollments which purport to measure the demand to which supply should be adjusted, are not very useful. The relevant operation is to determine what, in the public interest, should be the supply to which demand can adjust.

If one were to predict enrollment in 2000 on the assumption of a rigid, conventional education with high tuitions and limited student aid and designed primarily for young, male, upper-income students, the result would be quite different from that based on the assumption of a diversified education with low fees and liberal student aid, offered at convenient times and places, and catering to many different classes and backgrounds.

The upper limit on the number of persons who may participate in higher education is set simply by the number of persons over 18 in the population. It is not even limited by age. Some of the most active learners today are retired people over the age of 65.

The possibilities for expansion are illustrated by some facts about participation rates in higher education today. For example, the number

of women attending is more than a million less than the number of men. (See Table 3.)

The relative number of low-income persons attending is far below that for high income persons. Only 15 percent of persons 18 to 24 years

TABLE 3 **ENROLLMENTS BY SEX, 1973-74**

Men	4,972,000
Women	3,735,000
Difference	1,237,000

SOURCE: American Council on Education, *A Fact Book on Higher Education*. Washington, First Issue, 1974, p. 74-8.

TABLE 4 **PARTICIPATION RATE, PERSONS OF AGES 18 TO 24 BY FAMILY INCOME, 1972**

Income Class	*Percentage of 18-24 year olds attending college full-time*
$ 0- 3,000	15%
3,000- 5,000	19
5,000- 7,500	26
7,500-10,000	32
10,000-15,000	41
over 15,000	56

SOURCE: National Commission on the Financing of Post-secondary Education, *Financing Postsecondary Education in the United States*. Washington: U.S. Government Printing Office, 1973, p. 27.

TABLE 5 **ENROLLMENTS AND POPULATION OF AGES 18-24, SELECTED STATES**

	Population of Ages 18-24 (1970)*	*Enrollment** (1972)*	*Enrollment as Percentage of Population of Ages 18 to 24*
Arizona	211,000	124,000	59%
Utah	143,000	82,000	57
California	2,447,000	1,311,000	54
Oregon	238,000	123,000	52
South Carolina	352,000	94,000	27
Arkansas	211,000	54,000	25
Alaska	46,000	12,000	25
Georgia	588,000	141,000	24

* American Council on Education, *Fact Book on Higher Education*, Second Issue, 1973, pp. 73.68-9.

** Carnegie Commission on Higher Education, *Priorities for Action: Final Report*. New York, McGraw-Hill Book Company, 1973, pp. 101-2.

of age from very low income families are attending as compared with 56 percent of those from families with incomes over $15,000. (See Table 4.) There are also surprisingly wide variations among the states in college attendance. To mention the extremes, in one state, college attendance is 24 percent of the 18 to 24 population; in another it is 59 percent. (See Table 5.)

If women attended at the same rate as men, if low-income people could attend at the same rate as high-income people, if attendance rates were as high throughout the country as they are in the leading states, enrollment would probably be increased by at least 6 or 7 million. And if persons beyond the usual college age began attending in rapidly growing numbers, as they show signs of doing, enrollments would grow even more. A doubling of college attendance is not beyond possibility.

One may argue that the upper limit on college attendance will ultimately be set by the number of persons capable of doing college level work. But this limit is not as definite or rigid as is sometimes supposed.

On the one hand, we have learned over the past several decades that the number of persons capable of doing college work, as conventionally defined, vastly exceeds our earlier expectations. For example, one important study by Taubman and Wales shows that over the period 1926-61, when enrollment increased from 850,000 to 3,900,000, the average ability level of high school graduates continuing to college did not decline. In 1925, the average entering student was in the 53rd percentile and in 1961 in the 62nd percentile. Having myself been in college in 1925, and remembering the easy-going standards and the "gentleman C" of that era, and having observed the rising standards since, I am not altogether surprised at this change. Since 1961, the number attending has expanded greatly, and doubtless we are now dipping into lower ability levels. Indeed the community college exists precisely to extend opportunity to a wider range of students. Nevertheless, there are many

TABLE 6 **AVERAGE MENTAL-ABILITY LEVEL OF HIGH SCHOOL GRADUATES WHO ENTERED COLLEGE, 1925-1961**

	Percentiles Measured Upward from Zero		*Percentiles Measured Upward from Zero*
1925	.53	1950	.61
1929	.56	1957	.62
1934	.58	1960	.63
1946	.63	1961	.62

SOURCE: Paul Taubman and Terence Wales, *Mental Ability and Higher Educational Attainment in the 20th Century*. New York: McGraw-Hill, 1972, p. 18

indications that millions of young people of high academic ability are still not in college.[2]

On the other hand, the question of what we mean by college-level work is also ambiguous. The higher educational system has expanded and offered an ever wider range of both academic and vocational programs. We now look upon qualification not as meeting some arbitrary level of IQ, but rather as the capacity to benefit from additional education of an appropriate kind, whether it be academic or vocational. No one would argue that a high proportion of the population is qualified for our most selective colleges; and I am not suggesting that all institutions should have open admissions. But it may be argued that most people could benefit from post-secondary educational experiences if there were sufficiently varied institutions offering suitable programs.

So the question remains: How much higher education should be offered? And it cannot be answered merely by projecting demand on the assumption that higher education will continue as it now exists. It must be answered in terms of what amount would be in the long-run public interest if the higher education industry were properly geared up to meet the needs of whatever students would enroll. The question of what should be the mission of higher education and how our institutions should be organized to carry out this mission is the challenge confronting the higher educational community today. What part of it should be provided in traditional institutions? What should be the role of the proprietary schools? What part of the education should be available in new forms of home study, mechanized instruction, on-the-job training, etc.?

THE SERVICE ECONOMY

Frequently it is argued that the further expansion of higher education may be desirable but the nation cannot afford it. I shall approach this issue by examining one of the most profound trends in our economy, namely, the growth of the service industries.

The economy may be divided into three broad sectors: (1) *extractive pursuits* including agriculture, fishing, and mining; (2) *industry* including manufacturing, construction and power; and (3) *services*. The distribution of employment among these three sectors has changed dramatically over time. For example, since the turn of the century, the

[2] Both the College Entrance Examination Board and American College Testing Program report that average test scores of those entering higher education have been declining during the past ten years. This decline has been attributed to a variety of factors but undoubtedly the main factor has been the increasing numbers and variety of backgrounds of persons attending higher education. Cf. Leo A. Munday, "What Does it Mean if the Scores are Falling?", ACT, Spring 1974. See also K. Patricia Cross, "Looking Beyond Academic Ability," *Chronicle of Higher Education*, April 22, 1974, p. 24.

percentage of persons engaged in agriculture and other extractive industries has declined from about 38 percent to 5 percent. The percentage in industry over the same period has been fairly constant at around 35 to 40 percent. But beginning in 1950, this percentage has been trending slowly downward from 40 percent in 1950 to 36 percent in 1971. Meanwhile the percentage of persons employed in the service industries has increased at a spectacular rate. It was 28 percent in 1900 and today is about 60 percent.

What these figures say is that technology has enabled us to produce our raw materials and our industrial products with a declining percentage of our work force, and that we have chosen to use the released workers to increase the amount of services we consume. These trends

TABLE 7 **PERCENTAGE DISTRIBUTION OF EMPLOYED WORKERS BY MAJOR SECTORS OF THE ECONOMY, 1900-1971**

	Agriculture and Other Extractive Industries	*Industry*	*Services*	*Total*
1900	38%	34%	28%	100%
1910	34	37	29	100
1920	30	39	31	100
1930	27	35	38	100
1940	25	34	41	100
1950*	15	40	45	100
1960	11	39	50	100
1971	5	36	59	100

* Interpolated.

SOURCES: U.S. Bureau of the Census, *Historical Statistics of the United States, 1789-1945*, Washington: U.S. Government Printing Office, p. 65; Victor Fuchs, *The Service Economy*, New York: Columbia University Press, 1968, p. 207; *Statistical Abstract of the United States*, 1972, pp. 227-30. Because these figures were derived from several sources, they are not fully comparable. However, the trends they show are unmistakable.

have proceeded to the point that about 60 percent of our labor force is devoted to the production of services and only 40 percent is devoted to the production of things, that is, physical raw materials and industrial products. And there is every reason to believe that these trends will continue. Someday, one can look forward to a society in which our physical goods will mostly be automatically produced with only a technical and supervisory staff while the rest of the labor force will be performing services for one another. I would venture to guess that by the year 2000 at least 70 percent of our employment will be in the service industries and only 30 percent in the production of physical goods.

These trends toward service production will be hastened by three

important developments. First, there are abundant signs that the American people, especially the young, are increasingly questioning the traditional view that the proliferation of physical goods is conducive to the good life. Second, they are also recognizing that the unrestrained growth of physical production will place an intolerable strain on raw materials and energy resources, and that it will lead to equally intolerable pollution of the environment. The production of services, on the other hand contributes to the good life. It uses few raw materials. And it is remarkably clean in its environmental effects. I am not necessarily suggesting that there will be an absolute decline in the production of things, but I think there will be a slowing in the rate of growth and a rapid decline in the percentage of persons employed. I am suggesting that there will be a vast growth, both relative and absolute, in the production of services.

Let us examine for a moment the anatomy of the service industries. They are divided into two categories of about equal size in employment. The first category is ancillary to the goods-producing sector of the economy. It includes retail and wholesale trade, banking and finance, a vast array of repair services, personal services such as barber and beauty shops, etc. Employment in these ancillary services, as one would expect, is growing at about the same rate as total employment for the whole economy. The second category of services I call the professional services. It includes, for example, the health care industry; legal, engineering and many other professional services; entertainment and recreation; the arts; religion; government — federal, state, and local; and education at all levels. Employment in this professional category is growing almost twice as fast as that in the total economy. Today, it represents over a quarter of the labor force. By the year 2000

TABLE 8 **EMPLOYMENT IN THE SERVICE SECTOR, 1929 AND 1965**

in millions

	1929	*1965*	*1965 divided by 1929*
Services Ancillary to Goods Producing (wholesale and retail trade, finance, repair services, etc.)	13,270	20,301	1.5
Professional Services (health, entertainment, recreation, religion, education, government, etc.)	5,097	18,403	3.6
Total, all services	18,367	38,704	2.1
Total employed labor force	47,630	71,088	1.5

SOURCE: Victor Fuchs, *The Service Economy*, New York: Columbia University Press, 1968, p. 215

this category might well employ 40 percent of the whole work force.

The services that I have classified as professional — health, government, religion, education, the arts — are peculiarly related to human welfare and to the development of human beings. They touch profoundly the lives of individuals and determine the range of personal opportunity. They are the basis of our civilization. It is rich development of these areas that distinguishes a great culture. An uncivilized society — whether rich or poor — is one that is preoccupied with the pursuit of material values. When we speak of a great civilization, as distinguished from a merely powerful or opulent one, we refer to one in which the professional service sector is highly developed.

Another special feature of the professional service industry is that the amount of such services that can be consumed to advantage appears to be almost unlimited. Whereas, the size of our stomachs places a limit on food production and the number of cars, houses, boats, and campers we can use to advantage is restricted, the amount of services that can be used to advantage appears to be almost boundless. Suppose, for example, we were to provide at the highest professional level all the health services needed for the whole population, or all the psychiatric services, or all the legal help. How many physicians, dentists, psychiatrists, or lawyers would be needed? Suppose the nation embarked on early childhood education, universal day-care centers, and compensatory education for the underprivileged, how many teachers would be needed? Suppose we were to provide art museums, symphony orchestras, opera, and legitimate theatre throughout the country as some European countries do. How many artists, musicians, and actors would be needed? Suppose we were to design and decorate our homes tastefully, how many architects, interior decorators, and artists would be needed? Suppose our local governments were to be adequately staffed to control crime, to improve waste disposal and water supply, to carry out proper land-use planning, to organize adequate parks and recreation, etc., how many local officials and other workers would be needed? Suppose we undertook a nationwide program of continuing higher education and a massive effort to extend the frontiers of knowledge, how many professors would be needed?

It is not hard to conjure up ideas to employ millions of people (together with their assistants and secretaries and co-workers) to provide services that any reasonable person would agree are desirable. In fact, studies of the requirements for meeting desirable national goals such as universal health care, and adequate education, always end up with the conclusion that we lack the manpower.

From this analysis of the service economy, I draw two conclusions:

First, from the short-run financial point of view, it is plausible to say that we cannot afford to develop the service economy. But from the point of view of allocating our labor force for the sound advancement of our society we can and almost surely will devote increasing shares of our resources to the professional services. This is really what the great public debates on the financing of health services, education, cultural activities, and local government are about. The underlying issue is whether or not these services should be expanded. In the end, they probably will be because the need is so evident and the public demand so insistent.

Second, higher education will have an important part in the trend toward increasing consumption of services. Higher education is itself a professional service of high intrinsic value. Moreover, it is virtually the sole source of personnel for the other professional services.

LEISURE

So far I have assumed that the American people will take most of their technological dividend in the form of services rather than in increased consumption of physical things. Suppose, instead, they should decide to take the fruits of technology in the form of shorter working hours. How would this affect the outlook?

My first response to this question is that for many years, the American people have not shown much disposition to shorten their working time. For example, the number in the labor force as a percent of the working age population has slowly but steadily risen over many years. (See Table 9.) This rise has been the resultant of several opposing trends. On the one hand, entry into the labor force has been progressively delayed as higher education has grown, and exit from the labor force has been hastened by earlier retirement. On the other hand, the percentage of women participating has steadily increased. On balance, labor force participation has risen since 1940 from 56 percent of the population to 61 percent.

U.S. Department of Labor projections into the future also show slight increases in labor force participation. Similarly, average weekly hours of work have held steady in most industries since World War II (see Table 10), though an exception is retail trade where average hours have declined largely because of the increasing employment of part-time workers. The prevalence of overtime work, moonlighting, and overwork — especially for those in the higher echelons of American life — suggests that people do not necessarily wish to work shorter hours. Moreover, if one adds to working hours the time involved in commuting and other job-related activities, it is quite clear that the American people are not spending less of their time on work.

TABLE 9 **TOTAL LABOR FORCE AS PERCENTAGE OF NON-INSTITUTIONAL POPULATION, 1940-72**

	Actual
1940	56.0%
1950	59.9
1960	60.2
1972	61.0

SOURCE: *Economic Report of the President*, 1973, p. 220-1.

TABLE 10 **AVERAGE WEEKLY HOURS IN SELECTED INDUSTRIES, 1950-72**

	Manufacturing	*Contract Construction*	*Wholesale and Retail Trade*	*Services*	*Transport and Public Utilities*	*Finance*
1950	40.5	37.4	40.5	—	—	37.7
1960	39.7	36.7	38.6	—	—	37.2
1965	41.2	37.4	37.7	35.9	41.3	37.2
1970	39.8	37.4	35.3	34.4	40.5	36.8
1972	40.6	37.0	35.1	34.1	40.4	37.2

SOURCE: *Statistical Abstract of the United States*, 1973, p. 228.

Despite these trends of the past, it is not unthinkable that people might in the future devote less of their lives to work. They might enter the labor force later, retire earlier, lengthen their vacations, take extended leaves of absence, and shorten weekly hours. If these things should happen, what would be the effect on higher education? In my judgment, it would increase the amount of education. This would be so partly because one of the conditions of education is time free from work, and partly because education is one of the most rewarding and interesting uses of free time. Indeed one of the principal reasons that people may shorten hours, lengthen vacations, and take leaves of absence akin to sabbatical leaves is to enable them to take part in education in one form or another. In this connection, it is pertinent to note that the first definition of *leisure* in the Oxford Dictionary is: "Freedom or opportunity to do something." Leisure is not merely unoccupied time.

An important new field of study is concerned with factors determining the division of our lives among the three principal uses of time — work, education, and leisure — and with exploring the human meaning of each of these pursuits.[3] Those engaged in these studies point out that at present our lives tend to be divided sharply into three segments: youth predominantly assigned to education, the middle years devoted to work, and old age relegated to leisure. They suggest that human ex-

perience might become richer and more integrated if all three pursuits could be carried on in appropriate combinations throughout life. In Europe, interesting experiments are now going on to encourage return to education in the middle years. Worker sabbaticals for this purpose are becoming increasingly common in France, West Germany, and other countries.[4]

My conclusion about leisure is simply that we may find new ways to order our lives so as to provide more free time in the middle years. If so, some of this time will doubtless be devoted to higher education.

MANPOWER

Let me turn next to the manpower aspects of higher education. One of the most common and plausible approaches to higher education is to assume that the primary purpose of higher education is to prepare people for jobs. On this theory, the educational system should be geared to turning out the "right" number of workers for each kind of available employment. The chosen mechanism is to ration places in higher education according to estimates of future manpower requirements, the rationing to be accomplished by manipulating admission requirements and limiting the number of places available (as we do, quite mistakenly I think, in the case of medicine).

Some of the implied assumptions in this approach are: (1) that the number of jobs that require college training are relatively few (a frequently cited number is 20 percent); (2) that the jobs available for college educated people should be congruent with their educational backgrounds; (3) that the economy needs many persons to do menial tasks and these people should not be overeducated. In general, this line of argument leads to a restrictive educational policy.

This kind of educational policy is characteristic of the planned economies of the Soviet bloc. Their five-year plans call for given quotas of trained manpower at various future dates and call for the higher educational system to turn out the requisite numbers. This line of

[3] See, for example, Sebastian de Grazia, *Of Time, Work, and Leisure*, New York: Twentieth Century Fund, 1962; Special Task Force to the Secretary of Health, Education, and Welfare, *Work in America*. Cambridge, Massachusetts: MIT Press, 1973; Sar A. Levitan and William B. Johnston, *Work is Here to Stay, Alas*, Salt Lake City: Olympus Publishing Co., 1973. The Manpower Institute under the able direction of Willard W. Wirtz, former Secretary of Labor, is also studying these issues and trying especially to improve the transition between school and work for young people.

[4] Cf. James R. Gass, "Learning in an Open Society, a European Viewpoint," and James O'Toole, "Education, Work, and the Quality of Life," addresses presented to the National Conference of the American Association of Higher Education, March 11, 1974. These addresses were reported in the *Chronicle of Higher Education*, March 18, 1974, pp. 1, 3.

thought has not prevailed in the United States, but today it is being discussed widely. In America, we have looked upon higher education as opportunity which should be open to all qualified and motivated people. We have not only tried to accommodate all comers but also to respond to their free choices of fields of study. The glaring exception has been medicine. But recently, public policy makers at both the federal and state levels have been flirting with manpower quotas and have talked of holding down expansion on the ground that the future economy will not be able to absorb all the college-trained people.

In my opinion, the manpower approach is largely fallacious. Some of the fallacies are economic and some moral. I have presented these fallacies at length elsewhere,[3] so today I shall touch on them lightly. I would mention three economic fallacies.

First, the idea that the economy will require a more or less fixed inventory of occupational skills at each stage of its evolution is false. The economy is extraordinarily flexible in adapting to the labor it has. It adjusts by training its workers, by inventing new technologies, by substituting capital for scarce labor, by substituting among different kinds of labor, etc. We have all observed that an economy can go to war and reconvert to peace using vastly different mixes of skills with the same labor force. Similarly, different industrial countries operate successfully with entirely different mixes of skills and degrees of education.

A *second* economic fallacy is the assumption that valid predictions about the character of the economy and its skill requirements can be made for periods long enough to be pertinent to educational planning. The manpower requirements cannot be predicted because they depend on what the nation will be doing. The requirements will differ depending on whether the nation is at war or peace, whether it is exploring space or trying to solve problems of the inner city, whether it is emphasizing early childhood education or new energy sources or universal health care. Manpower requirements depend on what the country wants to do and paradoxically what it wants to do is determined in part by the way its people have been educated—by the values they cherish, by the tasks they think worth accomplishing, and by what they have been prepared to do. For example, if the educational system turns out a surplus of teachers, the nation might well grasp the opportunity to go seriously into early childhood education and day-care centers.

A *third* false assumption is that unemployment is widespread among educated people. Though there have been flurries of unemployment,

[3] "Manpower Management and Higher Education," *Educational Record*, Winter 1973, pp. 5-14. Reprinted in *AGB Reports*, Nov.-Dec., 1973, pp. 3-16

for example, among engineers in the aerospace industry a few years ago when the federal budget was cut back, and though it is true that college graduates are not snapped up as they once were, yet unemployment rates in the aggregate are much smaller for the educated than for the uneducated. (See Table 11.)

TABLE 11 **UNEMPLOYMENT RATES IN 1972 BY AGE, RACE, AND EDUCATIONAL ATTAINMENT**

	Educational Attainment		
	Less than 12 years	*12 years*	*More than 12 years*
Persons 18 to 34 years of age			
White	11.7%	7.0%	4.9%
Other	20.4	13.0	6.8
Total	13.4	7.7	5.0
Persons of all ages			
White	6.6	5.1	3.5
Other	10.6	9.6	6.5
Total	7.3	5.5	3.7

SOURCE: U. S. Office of Management and Budget, *Social Indicators* 1973. Washington: U. S. Government Printing Office, 1973, p. 137.

Let me turn now to three moral issues involved in the manpower approach.

First, the freedom of each person to choose his area of study and his vocation, allowing for personal talents, interests, and market opportunities, and to develop his own capacities to the full, is surely one of the most sacred of all freedoms. It is surely wrong to ration fields of study and entry into vocations admitting some qualified people and denying others. And it is equally wrong to deny people the right to develop their capacities on the ground that employment opportunities related to their education might not be available. Intelligent counseling of students is of course desirable, though it is not easy to be helpful in vocational guidance. But to plan the educational system in a way that rations places and thus denies choice is surely an act of questionable morality.

A *second* morally questionable assumption is that the main purpose of education is to prepare people for quite specific jobs, and that it is somehow wrong or wasteful to provide an education that will not be used directly in a vocation. This idea is surely a travesty on the purpose of education. It implies that education for each individual should cease at the point where he has received enough to carry out his job and that education beyond this point is wasteful or even corrupting. On the contrary, the purpose of education is to develop the intellectual and

moral powers of persons, to promote good citizenship, to enrich the culture, and to help people achieve the satisfaction of learning and knowing. The great spread of learning that has occurred in the past century is far from complete. Our ignorance overwhelms our knowledge and our folly vastly exceeds our visdom. Enormous amounts of educational work remain to be done, and only a part of it is vocational in the strict sense, though almost all of it, even the most esoteric and impractical, has important vocational overtones.

Finally, there is confusion as to ends and means. Education is not designed to prepare people to do whatever work flows from the blind and predestined imperatives of technology; rather, it is intended to produce people of vision and sensitivity, who will be motivated to direct technology into humanly constructive channels.

The limits of education are set, not by the dimensions of the jobs we see around us, but by the capacity of human beings to learn. And we are today far from reaching this capacity.

CONCLUDING COMMENTS

I have tried to show that the potential market for higher education is in the long-run very great. This is true whether one considers demographic trends, growth of the service economy, uses of leisure time, or manpower issues. The higher education industry might well double or treble in size during the balance of this century and a totally new kind of society might be created in which the level and the depth of education and the richness of culture would surpass that ever before achieved or even imagined. But for this to happen, several important conditions would have to be realized.

The political and educational leadership of this country would have to display much more imagination and daring than they now show. They would have to visualize a society in which most people were educated up to their potential and in which full development of human capacities was a major national objective. They would also have to muster a great deal of initiative, and overcome the timidity and the shortness of time perspective that now characterizes most educational thinking and planning.

Educators would have to adapt higher education to the needs of people of all types, and to invent new kinds of education and new modes of delivery suited to a wide range of backgrounds, abilities, and interests. New kinds of institutions and new educational experiences outside institutional auspices would be needed.

Programs would have to be varied, flexible, relevant, attractive, and exciting. Such programs would include both liberal and vocational studies and also studies relating to the arts, home, family, and practical

living. Instruction would have to be offered at convenient times and places and be available to part-time students. Admissions requirements would have to be adjusted to make opportunity virtually universal. Perhaps new forms of certification and recognition other than traditional degrees would have to be devised. Thus, education would touch people of all backgrounds and aspirations and its content would encompass all aspects of life.

Education would in its overall impact be designed to sharpen intellects, broaden perspectives, increase personal effectiveness in life as well as vocations, and raise the level of culture. It would be both liberal and practical in its general thrust, and there is no inconsistency between these. And it would be honest.

I raise the question of honesty with some diffidence. Higher education is likely in the next few years to be laboring under great temptations toward hucksterism. The conventional student market is not going to be very brisk in the next few years. To hold their enrollments, or to find new sources of students, institutions, both public and private, are going to be tempted to resort to gimmicks and lower standards. Excellence in education is not merely a matter of limiting admissions to select students, providing conventional academic programs, and upholding traditional standards. Rather, excellence is providing varied kinds of education that are relevant and helpful for persons of many different backgrounds, abilities, and aspirations. To help a person of limited background and low ability to learn, if well done, is no less excellent than giving a brilliant upper-class person a splendid liberal and professional education. Moreover, these two are not incompatible. Both should be done, and both should be done in the spirit of excellence and honesty of purposes and standards.

The terms on which education is available would have to be such as to encourage the broadest participation. These would include low tuitions, generous student aid without heavy loans and onerous means tests, and released time from work. The need is for a revival of the kind of thinking that led to the founding of hundreds of church-related colleges, to the Morrill Act, to the G.I. Bill, and to the National Defense Education Act.

In conclusion, one caveat must be added. Education is not a cure-all for the problems of society, and it will not lead to the perfectability of man on this earth. But it is possible to enhance human powers, to enrich civilization, to provide greater equality of opportunity and of human worth, and to raise the level of moral and aesthetic values. As I look around our society and ask myself from what institutions may we expect help in achieving these goals, I find myself turning to

fully controlled conditions, organisms will do as they damn well please." This shook me a bit. I then recalled my own experiences as an academic administrator and remembered that of all humans, faculty especially do not like to be done good to at. I may even have been slowed a bit by a fleeting memory of a distant time when in reading Immanuel Kant I ran across the suggestion that people ought to be treated as ends not as means. In any case, I have been reminded by the Carnegie study that in some states, eager legislators and state budgeteers have already beaten me to the draw and have mandated both the number of classroom contact-hours for college faculty and appropriate faculty-student ratios. Presumably my other inspirations will be similarly anticipated in short order.

MEASURING ACADEMIC PRODUCTIVITY Measuring academic productivity is a pretty sticky business. If the graduate of a good engineering school in the 1920's could build a decent radio or construct a suspension bridge, but the graduate of an engineering school in the 1950's and 1960's can get a man to the moon, has educational productivity increased? And would knowledge break-throughs have occurred without time spent in the laboratory as well as in the classroom, in solitary thought as well as in seminars? When the late Glenn Frank was President of the University of Wisconsin, he was asked by a successful livestock farmer on the State Assembly's Finance Committee how many hours his faculty taught. Frank replied, "Nine." The farmer nodded approvingly and said, "Nine hours a day? That's a fair load." Frank explained that he'd meant nine hours a week. The legislator exploded until Frank asked him, "Sir, your farm is noted for its prize bulls. Do you judge their value by the number of hours a week that they work?"

There is, I think, an unfortunately widespread and mistaken belief that academics are a lazy and pampered crowd: light teaching loads, long vacations, the security of tenure, portable pensions, good salaries, worktime to do research on things of interest to them, sabbaticals, laboratory and library facilities for experimentation and reference, conferences and meetings in distant cities for collegial refreshment. What a life!

The difficulty is that for most faculty and collegiate administrators most of these vaunted privileges are a myth. And even where some of them have existed, they are increasingly being eroded by tight budgets and extraneous demands on the time of both faculty and administrators. Every study I know anything about, including those reported by the Carnegie Commission, indicates a fifty to sixty hour average work week by academics as well as an 11-month-plus work year. As everyone knows, tenure is no longer sacrosanct and may be more and more diffi-

cult to obtain by those who have recently entered the profession. A third of academic personnel do not have TIAA/CREF portable pensions. Instead they are locked into state pension systems that give few or no benefits to those who opt out, or are forced out, during the first couple of decades of their employment.

There is something else that few outsiders appreciate—even at times, I fear, we trustees. I suppose that every occupation and profession has its own particular strains. Most trustees come from business or from non-teaching professional fields. Whatever the wear and tear of these occupations, I doubt that many trustees whose enterprises deliver fairly precise goods or services can have any real understanding of the anxieties that haunt those whose basic business it is to structure and restructure knowledge in order both to purvey it and to question it. Nor has there been any very consistent understanding of the traumas of academic administrators as they, in recent years, have attempted to negotiate the white water of changing social values and competing—not to say conflicting—expectations that have cascaded down upon our institutions of higher learning.

In my observations over a thirty-year period, colleges and universities tend to be incubators of anxiety for most professionals who work in and for them. "Sicklied o'er with the pale cast of thought" is more than a Shakespearean aphorism. It is an endemic academic tendency which, unless constantly fought and dispersed, casts a dark mist upon the groves of academe. This mist is, I am sure, unevenly spread over particular institutions, departments, and areas of the country. But with new tensions created by tight budgets, internal governance struggles, and affirmative action mandates, the mist of the moment is all but ubiquitous.

So many pictures, old and new, race through my mind:

- I see myself three decades ago sitting helplessly at the typewriter knowing that my Ph.D. dissertation is only half finished, feeling panic as nothing comes to mind as I try to find a beginning for Chapter VI, hating the entire system for forcing me back upon my own immaturity and ignorance;
- I see a thirty-eight year old colleague in the sciences, outpointed and put down in a department meeting by a junior colleague, sensing that never again would he be respected as a scientist and that the world had passed him by;
- I see a brilliant young humanist whose literary diet led him to view the universe with the jaundiced eye of twentieth century nihilism, and who ended up in his garage with a monoxide hose in his mouth;
- I see a sensitive political theorist, slightly drunk, accosting me in the

lobby during an intermission of the Broadway production of "Who's Afraid of Virginia Woolf," saying, "I bet nine-tenths of this audience thinks this play is pure fantasy; but you and I know better, don't we?"

- I see a sensitive, fifty-year-old, college-president friend of mine slumped over his desk, dead from a heart attack provoked by student and faculty bullying;
- I see a brilliant young academic so appalled by the psychic violence and the sophistry of his colleagues, that he took off twenty years ago for a Maine fishing village where he has lived ever since;
- I see endless committee meetings at which trivia are fondled and important issues nibbled to death by contentious and anxiety ridden colleagues;
- I see young faculty so hurt or ignored by senior colleagues as to buy the friendship of young students with cheap grades and an involuted sycophancy;
- I see forty-five-year-olds, tired of teaching the same stuff, lacking the opportunity and the will to become updated, caught in a non-transferable state pension system, sinking slowly into a permanent torpor relieved only by the bottle and somebody's else's wife;
- I see eager graduate-student minds stretching to capture the multidisciplinary richness of a problem, told not to fritter away their time, and to settle for the demands of the departmental system.

These are not the only images I have of the world of higher education. If they were, I should have jumped ship years ago. But there is far too much of this negative reality around, and unless we are careful, the anxieties produced by the increased firing of even tenured faculty, and the knowledge that there are no jobs elsewhere, will exacerbate the hostilities and the psychic withdrawals that already exist on too many campuses. The competition for security can make people mean.

During the 60's, when a sellers' market existed for both administrators and faculty, tensions or unhappiness on one campus could be relieved by an easy jump to another position in a different institution. Or, if the life of scholarship and teaching palled, one could aspire to a deanship or a college presidency, or a resident directorship of an overseas outpost where the world could be saved with a tropical collins in hand.

Now these opportunities for psychic relief are more and more difficult to find. Instead, faculty will be tenured-in for longer periods of time; fewer young people will join the staffs and provide the ginger of newness; administrators will see their leadership capabilities frittered

away in endless negotiations with anxious and often preemptive faculty committees, union bargainers, trustees, task forces, student caucuses, and state budgeteers; timidity will spread a dull gray Linus blanket of tradition over every aspect of college life; student alienation will become endemic. A vicious cycle will have been created, for public and legislative support will wither and this will exacerbate the very tendencies that led to public disillusionment in the first place.

This is a possible—some would say a probable—scenario of the future. But it does not have to be. I contend that there are ways of turning much of this around.

If a person from Mars (just think, even a few months ago, I probably would have said, "If a *man* from Mars . . .")—if a person from Mars should fly his UFO onto a college campus and stop the nearest streaker or dean (I am trusting here that these would not likely be the same people)—to ask what goes on here, the reply would probably be, "This is an institution of higher education." If the Martian then asked, "What do you manufacture here?" hopefully the appropriate reply would be, "This institution manufactures nothing. It grows ideas and people—or more precisely, it helps young people to grow and new ideas to develop." The visitor catches on fast. After learning more details, the Martian finally asks: "Do you help *non*-young people to grow: faculty, administrators, librarians, faculty wives, retired faculty?" The streaker has streaked on. But the Dean tilts his head quizzically and says, "I'm not sure I understand you." The Martian replies, "How can people who have stopped growing themselves help others to grow or help new ideas to be born?" With that, he presses a button, pops into his UFO and streaks off—sorry, zooms off.

IMPERSONALITY It has often seemed to me that those whose melancholy duty it is to worry about dwindling financial resources are led almost invariably to think of the people who surround them in the academic community in terms of impersonal units. That is not Martha Smith and Harry Jones, two part-time students from St. Louis; instead, they together are one F.T.E.—one full-time equivalent. That is not Dr. Brown, Professor of Humanistic Studies; that is one count of the allowable full professors on the Liberal Arts T-O. The sad faced lady on the bench is not Dean Clark's widow. It is TIAA beneficiary number 473800. Computers, as someone has said, do not raise the bogey of creating machines that think like people; but people who think like machines.

As times get tougher, as the incremental budgeting of the 60's gives way to the decremental budgeting of the 70's, unless we are scrupulously careful, the temptation for state budget officers, state coordinating com-

mittees, boards of trustees, presidents, provosts, deans, and business managers to think like machines, will markedly increase. In part, this developing impersonality will be a psychic baffle against the pain of giving pain. In part, it will represent the impact of accountability demands from public and even private donors and monitors. To attack donors and monitors for wanting more efficiency and effectiveness in post-secondary education is surely a cheap shot. As I said in an article in *Change Magazine* a year ago, I have little patience with those who dismiss all attempts to improve the efficiency and effectiveness of higher education as unwarranted interference with the sacred prerogatives of academe. We need far more effective management and more efficient planning than we presently have. But we must be aware of the subtle paradox inherent in the creation of structural and mechanical means to deal with organic and psychic problems.

My real plea is not that we dismantle planning and cost-effectiveness systems. Nor do I have any elixer that will soften the necessity in the proximate years ahead of making hard and painful administrative and committee choices, many of which will be devastating to intimate colleagues. What I do want to repair to is a kind of square-one question: "Is there a chance that the traumas of diminishing resources, disenchanted consumers, and the seemingly impersonal requirements of imposed quantitative analysis, can be mitigated by attention to qualitative changes in the lives of all those associated with institutions of higher education?" If we cannot save everyone, can we help those who remain to start growing again: especially faculty and administrators? For I have a fairly simple theory. It is that what students take away in a positive sense from an institution of higher education is little more than the spillover of excitement and commitment that they observe in the adult models around them. If administrators, faculty, and support staffs are made up of contentious cynics and spiritual zombies, students and their financial mentors will develop a notion of the life of the mind that is finally expressed in the phrase, "Who needs it?" If, on the other hand, they find themselves surrounded by human beings who exude dedication and excitement in their own lives, an invaluable role model is created as young people are induced to recognize the possibilities of joy in the options of continuing growth.

If you and I are asked about the value of our own college experience, most of us would refer to the influence of a few faculty and other staff friends who cared enough about us as individuals to make us work, or who caught our imagination as exemplars of rational and decent human beings—people we would like to emulate; or who had the knack of making what they knew or what they pursued exciting enough to

make us want to join the chase. If you share my perception, then the most important thing about a college is the quality of the lives of the people who staff it.

STIMULATING GROWTH How can the juices of growth be stimulated in the adults who staff our colleges and universities?

There are many points of entry into this problem. I think that a major point is at the level of boards of trustees. We are sufficiently marginal to the day-to-day workings of the present system, yet sufficiently tied to it and concerned about it, to make an enormous difference if we have the will. We can do far more than most of us have done in the past to help public and private donors to maintain and even increase financial resources for higher education. This in itself could help to reduce a portion of the destructive anxieties that seem to be increasingly manifest on campuses. But beyond this important function, we trustees can pay special attention to the care and feeding of the chancellor or president who reports to us. We can exercise restraint in complicating his life still further with our interference in day-to-day administrative decisions. We can give him support in making hard choices. We can help as a sounding board for organizational changes that may help or hurt his capacity for academic leadership. We can insure the chief executive adequate personal assistance—especially in those aspects of work where he may be weak by aptitude or training. We can insist upon frequent short leaves and occassional long leaves for him so that he can replenish his energy, get new perspectives, and generally, as my fathe used to put it, "Keep his soul on top." When necessary, we can tell him with firmness as well as kindness that the institution needs new leadership, that he needs to turn to a new kind of task, and that we will make provision before or after his resignation for some useful and necessary decompression chamber of study or travel.

I mention this relationship between board and president first because the success of that relationship can set the tone for an entire institution. If we as trustees become part of the problem rather than part of the solution we produce more mischief than we are ever aware of. Those of us who are trustees need more educating about our key responsibilities than most of us ever get. I commend to the Association of Governing Boards the fostering of additional learning experiences for trustees so that we may play an increasingly significant and appropriate role in developing the skills and morale of the administrators under us.

What is true of trustees is equally true of top executives and administrators. *The great college administrator, in my estimate, is one who understands the relationship between helping adult colleagues to grow*

and helping students to grow. Just as the trustees need to worry about the president's mental and physical health, so he must be concerned with the health of those who share with him the major administrative tasks of managing the university: vice presidents, provosts, business managers, personnel directors, and so on. Administrative sabbaticals; frequent short vacations for those who are impossibly pressed by tension and overwork; early attention to signs of irascibility and neurosis; a word of support and gratitude for a brave and wise decision; even more important, a word of general support along with counsel when a specific matter has been clobbered; involvement of spouses in circumstances and ceremonials that give administrators a brief sense of status and worth; a demonstration of collegiality in the formulation of policies that involve the cooperation of administrators in their implementation; keeping ever alive the possibilities of promotion from within. These are some obvious ways of nurturing the growth of administrators.

Most of these suggestions are, I believe, applicable at the level of deans, associate deans, divisional directors, and department or program chairmen. Anything that gives people a sense of being valued, temporary relief from inordinate pressure and attention, occasional opportunities for self-realization, and a feeling of creative partnership in collective activities and problem solving, clears away a lot of weeds and opens up new opportunities for growth.

FACULTY A special word needs to be said about faculty. The ideal faculty model, I suppose, is someone introspective and disciplined enough to find great psychic satisfactions in the lonely pursuit of new knowledge, someone secure enough to work effectively with others in team research and academic committees, someone gregarious enough to love students, someone articulate enough to do inspired teaching, and someone concerned enough to indulge in a variety of public services. I have known very few of these renaissance types in my life. Most faculty play one or two of these roles passably. Part of faculty anxiety is that the expectation is so far beyond the reach of most of them. One of the psychic compensations for these performance short-falls used to be the deference that teachers received from students. Even though this was in part a deference of manners and prudence, it eased some of the hurt left over in faculty psyches from perceived multiple-role inadequacies. Much of this has changed. Students are bolder, franker in their criticisms, less frightened by faculty sanctions. Today, they are as often an additional source of threat to faculty egos as they are sustainers of those egos. My hunch is that part of the changed student attitude is induced by subconscious comparisons of, say, an oceanography professor's lecture and

last night's T.V. episode in the explorations of Jacques Cousteau. It is tough on a $25,000 biology professor to compete in terms of dramatic techniques with a million dollar documentary. The implied criticism of faculty in this respect is woefully unfair, but in a subconscious way it may be prevalent.

How does one grow faculty, or help them to grow?

One answer might well be to gain faculty support and cooperation in reconsidering the existing system of faculty committees. On many campuses, faculty committees have become metastatic—consuming up to 50 to 60 percent of a faculty-member's time and vitality. Some faculty committees, involving matters of curriculum and certain classes of personnel actions, are indispensable. But committees involving faculty at multiple points in essentially management decisions on budgets, facilities, and parking spaces, can produce an organizational chamber of horrors. Even if the academic climate is presently unfriendly to a re-rationalization of administrative-faculty prerogatives, encouraging faculty to initiate such studies themselves, or raising such issues in terms of possibly favorable trade-offs in contract bargaining, may be of increasing importance if faculty are to find additional time for themselves and their students.

Second, faculty lives can be freed up if faculty will face up to the desirability of new mixes of pedagogic arrangements and to the imaginative employment of new educational technologies. I commend to them and to you the Carnegie volume called *The Fourth Revolution* which deals perceptively and creatively with the latter. Audio-visual and programmed-learning techniques can be used to stimulate individual student learning while reducing the burden of daily preparation on the teacher.

In regard to new mixes of pedagogic arrangements, to move from 200 to 300 students in a lecture course cannot make much difference to the lecturer as long as he has some additional help in grading papers and exams. As a trade-off, moving from 30 in a graduate seminar to 15 may make a substantial difference to both the instructor and the students. Incidentally, the Carnegie Commission recommends a massive reduction in the number of separate course offerings as another means of saving money, although I am not enamoured of their strictly student-demand approach to the question of what courses should go. Some low-enrollment courses, I think, should be retained as a cultural anchor to windward. Who would have dreamed a few years ago that classics would have a new birth of student demand in the 70's?

Third, and based upon faculty time and institutional money freed up by the above, all kinds of opportunities can be opened up for enrich-

ing the lives of individual faculty members:

- faculty can be given temporary load reductions in order to work on a new course or an important area of research;
- modular travel grants can be awarded to improve faculty opportunities to move, during a short or long vacation, to another country or to another area of this country in order to refresh and update their knowledge about a particular course or part of an academic field;
- mini-courses of one or two hours can be encouraged, enabling faculty to try out new ideas in an experimental setting;
- the concept of the sabbatical can be reinstated and reinforced, recognizing that the knowledge explosion will drown all of us if our learned professionals are not given time to break away from what they are doing on a day-to-day basis;
- colloquy and conference funds can be protected at all costs—even when the trade-off may be the anguish of another firing;
- teachers whose subject-matter has become obsolete can be retrained into cognate fields where demand is higher (Carnegie recommends, for instance, that some agriculturalists might be retrained as environmentalists);
- faculty can be encouraged to work with the largely untapped market of adult learners—working through non-traditional programs, finding fresh stimuli in a new pedagogic setting while helping the university with new tuition resources;
- faculty can refresh their spirits by using some of the time regained by devices suggested earlier for additional contact hours with individual students, many of whom hunger for better counselling and more effective academic guidance;
- temporary faculty exchanges can be worked out with other institutions in order to give tired teachers a new perspective and challenge.

I have only scratched the surface. All of us, if we put our minds to it, could think of other ways in which the lives of faculty members could be made richer and more rewarding. Many of these changes can take place in an atmosphere of decremental budgeting if we ask ourselves basic questions about effective resource allocation and the imaginative use of educational technology; and if we recognize that even when general budgets are squeezed, government agencies and philanthropy are still looking for investment opportunities in human capital. Furthermore, a very few pioneering states like Florida are already setting aside funds from the state's overall higher education budget for staff development purposes.

All of what I have said to this point is ultimately directed, of course, at the welfare and growth of students. I do not know enough to tell you

how to turn on the light of enthusiasm in students by direct action. Many of them today are in a perverse and unsettled mood. And, of course, although students are central, they are also transient. My guess is that we do them our greatest honor and benefit by consciously improving the quality of the institutions they attend: the quality of life of chancellors and presidents, of provosts and deans, of department heads and faculty; the quality of academic standards and professional requirements. If we can do this, the great enterprises we represent will continue to flourish even during periods of financial retrenchment.

At its best, a college or university is a dazzling phenomenon: a place of excitement and ferment, a place where history meets and informs the future, a forum for the re-examination of each generation's eternal verities, a luxuriant garden of wisdom and skill, a redefiner of style, a cafeteria of options. Institutions of higher education at their best, like poets at their best, are always slightly counter-culture—anti-establishment. But their excesses of criticism are rarely any more simplistic than the catechisms of the powertul and secure. I should be loathe to substitute the orthodoxies of Boards of Trustees for the heterodoxies of the working academy. I really doubt that anyone has ultimate truth by the tail. My faith is that civilization progresses more by questioning than by the repetition of accepted assertions.

ONE FINAL NOTE Somewhere in the 50's or 60's, faculty and students seemed to lose all sense of loyalty to the institutions of which they were a part. Loyalty was to a professional discipline, or to a geographic region, or to a way of life—but rarely to an institution. Now that fortunes are somewhat reversed, perhaps, if together we work at it, we can recreate the sense of institutional loyalty that I recognized and valued when I was in college. At its worst such loyalty was maudlin and nostalgic. But at its best, it provided everyone connected with a college a deep sense of psychic security and mutual trust.

In a world in which the only responsible education is education for contingency; when all the familiar moral landmarks seem to have crumbled; when true feeling is threatened by transient sensation; when, in the haunting words of Sir Francis Bacon, "My soul hath been a stranger in the course of my pilgrimage;" a renewed concern with improving the human resources within our several institutions of higher education might have enormous significance. For institutions of higher education peopled by vibrant human beings could, if we give them a little time, turn the decay we see all around us into the nourishing mulch of some future Spring awakening.

STEPHEN K. BAILEY is Vice-President of the American Council on Education. A Rhodes Scholar from Hiram College, he received a Ph.D. from Harvard, and taught political science and public affairs at Hiram College, Wesleyan University and Princeton, before going to Syracuse University. There he served as Chairman of the Policy Institute of the Syracuse University Research Corporation, and as Professor, and later, Dean of the Maxwell Graduate School for Citizenship and Public Affairs.

Dr. Bailey was a founding member of the National Academy of Education, past President of the American Society for Public Administration, and past Vice-President of the American Political Science Association. He is a member of the Institute of International Education and the Commission on Human Resources of the National Academy of Sciences.

An active participant in public affairs, he is currently a trustee of Hiram College and a regent emeritus of the State of New York. He chaired the National Advisory Committee on Education Laboratories (under HEW) from 1967 to 1970; in 1964 he served on the Presidential Task Force on Government Reorganization, and in 1965 headed the U.S. Bureau of the Budget Task Force on Intergovernmental Program Coordination. Dr. Bailey formerly was an Administrative Assistant to Senator William Benton of Connecticut, and was mayor of Middletown, Connecticut.

He holds two honorary degrees and has authored numerous books and articles on politics, government and education, the most recent of which is *Congress in the Seventies*.

HOWARD R. BOWEN is President and Chancellor of the Claremont University Center. He holds B.A. and M.A. degrees from Washington State University, a Ph.D. from the University of Iowa, and has engaged in post-doctoral study in England, at the University of Cambridge.

Dr. Bowen served as Chief Economist to the Joint Committee on Internal Revenue Taxation from 1942 to 1945, and as economist for the Irving Trust from 1945 to '47. Prior to this he had taught economics at the University of Iowa, and in 1947, returned to academia as Professor and Dean of the College of Commerce of the University of Illinois, and later, as Professor of Economics at Williams College.

In 1955 Dr. Bowen became President of Grinnell College; he held the same office at the University of Iowa from 1964 to '69. In 1969 he moved to Claremont to become Professor of Economics at the Claremont Graduate School, a position which he still holds, in addition to that of President and Chancellor of the Claremont University Center.

Dr. Bowen is a trustee of Grinnell and Occidental Colleges and was formerly on the Tulane University Board of Visitors. In addition, he is a member of the Board of the Common Fund, the Council for Financial Aid to Education and the American Association for Higher Education. He has served on the Task Force on Higher Educational Finance of both the National Board on Graduate Education and of the National Council of Independent Colleges and Universities.

The holder of several honorary degrees, Dr. Bowen has written many articles and books on economics and higher education financing, among them *The Finance of Higher Education* and *Efficiency in Liberal Education*.