

The Need for College Scholarships

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If anyone were to ask me for a justification for spending large sums of money on educational scholarships I would point first to what has been happening to the personnel requirements of industry in this country in roughly the last 30 years.

In the first quarter of this century there were few jobs in business or industry that required much more than the ability to read and write as far as a strictly formal education was concerned. Many a successful enterprise was founded, operated and controlled by men who had not had the opportunity to study beyond the twelfth grade, if that far, and who chose even their most important executives on the basis of such qualities as industry, shrewdness, ambition and common sense without much regard to the quantity of schooling involved.

Even in such a technical field as engineering the man with experience, a little knowledge of trigonometry, and a genius for tinkering with gears and levers still managed to hold his own. The scientist in industry was a rare bird indeed. Except in a few far-sighted corporations, he was simply ignored and classed with Dr. Johnson's lexicographer as a harmless drudge.

I do not think that I need to enlarge on the contrast between this situation and the one that exists today—when a man without at least a bachelor's degree can hardly hope to rise above the rank of laborer or clerk—when each year it becomes more necessary for the engineer to go even beyond the bachelor's degree in order to rise in his profession—when industry is begging the scientist for more basic ideas to keep the wheels turning, or at least greased to the point at which the turning will result in profits—and when an ever-increasing number of those in the most

important positions are entitled to write PhD after their names.

This extraordinary change does not mean that we have any less respect for industry, shrewdness, ambition or common sense. It means simply that our society has grown so bewilderingly complex that these qualities by themselves are no longer sufficient. We must have men and women trained well beyond the scope of a high school education to attack the problems with which modern society is faced, and to make the kind of decisions which—if improperly made, without a complete grasp of the complexities involved—could result in the disintegration of our society. Furthermore we must have these trained people in very large numbers, not only in industry, but in government, in the professions, and—if we are to continue to turn them out at all—in education. They are no longer a luxury, a frill or a small elite group. They are essential to our survival and they are a fair-sized army.

There is no longer any question of the value of a college education either to the individual or to the society in which he lives. There is only the question of how we can educate enough people to care for our great need with the facilities we now have, or are likely to be able to create in time to do much good.

This brings us to the question of who should be educated beyond the high school level. I am not going to attempt to answer that one, but it seems clear that we cannot afford to carry everyone through four years of college—nor would this be desirable if we could. Selecting those who will most profit from a college education and afterward yield the biggest return on the investment is something on which, according to my official title, I am supposed to be an

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expert, and I can assure you that I—and all the other experts—have as yet found no satisfactory answer.

There is only one point on which I think we would all agree. The selection cannot be made wisely on the basis of the ability of the candidate or his family to pay the freight. History records the ruins of many a civilization which confined the special culture on which that civilization depended to a privileged few who became so self-protective and rigid that, like the dinosaur, they failed to adapt to changing conditions. One never knows from what kind of a background or environment—rich or poor, luxurious or squalid—the right combination of genes will develop into a mind which, if given the proper training, will be able to solve some problem that cries out for solution. In making our selections we must, therefore, leave ourselves the widest possible field of choice, and this means at least the elimination of the size of the family bank account as a limiting factor.

Who then is going to pay the bill? A college education is expensive and it must become more so as time goes on or it must deteriorate in quality. There are very few colleges in this country today whose tuitions cover even half the cost of the education of a student. Thus every student, whether on scholarship or not, essentially costs the college money. It is in recognition of this fact that many scholarship donors have with each scholarship made an additional donation in some amount to the college's general funds.

Tuition goes up

In the past the difference between the tuition fee and the actual cost has been made up from the interest from endowment funds given by farsighted and generous people who, thanks to a more favorable tax structure, were able to accumulate fortunes to be given away. Because of these endowment funds colleges have been able to carry those highly desirable students who could pay their own way only partially or not at all. But the income from endowment funds is largely a fixed one. As a rule colleges cannot afford to indulge in the kind of investment that will yield enough to keep pace with inflation.

Five years ago the tuition at the California Institute was \$600 a year. Today it is \$900 and in 1959 it must go to \$1275. Thus in 1959 we will have to take over twice as much from our endowment funds to give the same relative amount of scholarship support as we did in 1953, and this does not take into account those who must have more than full tuition in order to eat and have a place to rest their weary heads.

Additional endowment funds large enough to yield significant amounts in interest are rare in these days when individual initiative must more and more content itself with being its own reward, and colleges must rely more and more on annual gifts received in

one year and spent in the next—if indeed they have not already been spent in anticipation.

Individuals, foundations and corporations have been and are being extraordinarily generous. The colleges are most certainly grateful. I hope I do not appear to detract from this gratitude when I say that it behooves these individuals, foundations and corporations to be even more generous in the future. If one hundred and sixty million people in these United States are to exist together in reasonable harmony with themselves and the nations around them, are to be supplied with the goods and services that make for a decent standard of living, and are not to fall into chaos, we will need all of the wise leadership at every level and in every line of endeavor that all of the colleges of this country can possibly select and train—and in our selection we cannot afford to pass over the leadership potential that may happen to develop from an economic environment that cannot pay for the training.

If, by now, I have made clear the reasons why we must strive to discover and to educate at the college level every promising boy and girl, regardless of economic background, and why the colleges can no longer hope to do this on their present resources—why, because of rising costs and increased demand, they must have additional scholarship funds—I have done what I set out to do. But if I were asked to help in this essential endeavor I would want to know something more. I would want to know whether there were not other and even better ways of taking care of this problem than adding one more worthy cause to the dozens already clamoring for my attention. I would—before anything else—want to look at the alternatives.

Neglected money

For example, what about the rumor that there are thousands of dollars of scholarship money lying around unused? Personally I have never run across any of this sadly neglected money nor have I met any other scholarship officer who has unless—and this I think may be largely responsible for this rumor—the donor so restricted the conditions of his gift that only once in 20 years can a candidate be found who meets the qualifications. Any college that itself possesses unrestricted idle funds must either be unable to attract students or fail to encourage applications from those who cannot pay their way.

What about loan funds? A number of colleges report surpluses in these funds so why not cut down on the free rides? There are two answers to this question. First there is the reluctance on the part of parents to commit a 17-year-old freshman to several thousand dollars worth of indebtedness to be paid off after graduation, especially in fields like engineering and

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science, in which a very large proportion will want to go on to several years of graduate work.

Even in the unlikely event that we can hold to the present rate for room and board, it will, commencing in 1959, cost a student living in our dormitories \$2500 a year to cover everything including a small amount for clothing and personal expenses. Even a moderately well-to-do family with two or three other children in or about to enter college will find it difficult to meet this charge, and there are many hundreds of worthy applicants whose families could not contribute a half or even a quarter of this amount. To borrow the remainder would, by the time a student's formal education had ceased, create a really heavy burden of indebtedness.

Deferred payment plans

The second answer to this question is that, in the face of rapidly rising costs, colleges already are more and more resorting to a system of part loan and part scholarship in attempting to cover financial need. Caltech in 1959 will offer a choice of several deferred-tuition payment plans, whereby about one-third of the tuition is paid in the usual way and the remainder plus a small amount of interest is paid in monthly installments spread over a period of as much as ten years from the date of matriculation. For years we have required all seniors who ask for scholarship aid to take one half of their need in loans, whether or not they intend to go on for graduate work, and for the past three years we have in a number of cases offered loans in place of scholarships to entering freshmen.

The fact remains, however, that few applicants without fairly strong family resources will commit themselves to a large indebtedness at graduation. Rightly or wrongly most of them will rather forego the kind of education that they want and deserve, and either accept one not as suited to their abilities or give up the idea of college altogether. Loans are an important factor in the problem and will become more so, but they can never be a major solution.

To what extent should a student be required to earn his own way? This will, of course, depend on the other demands made on his time by the particular college he is attending. His most important task is to get the most out of the educational opportunities that are offered him. Many colleges now offer a kind of package deal consisting of some scholarship, some loan, and a part-time job. Caltech requires that every scholarship student beyond the freshman year earn at least \$600 a year, including term time and vacation periods. If he fails to do so without very good reason his scholarship is reduced by the amount which he falls short of the \$600.

Most colleges will agree that a student should not try to earn money during his freshman year. The

average student will then in a four-year period earn a total of about \$2,000, to be applied against bills amounting to \$10,000.

It is true that a very few fortunate individuals may earn nearly \$2,000 in one year. If they do we have consistently refused to penalize them and have considered their need as we do the others on the basis of the \$600 minimum. It is our hope that additional scholarships will enable us to continue to reward the industrious and the self-reliant by not confiscating the savings which they themselves have earned.

And now, finally, what about the government—state or national? Why not pass the burden to the taxpayers? The state of California is starting its third year of a state scholarship program. It is a good program and well administered, but the maximum amount of aid which an individual can receive from it is \$600 a year, and while this amount may some day be increased it is unlikely that those who meet in Sacramento will ever feel that the voters will stand for an increase sufficient to keep up with rising costs. Furthermore, these scholarships are, of course, available only to California residents and must be used at California colleges. Where similar programs develop in other states they follow the same pattern. To a college which for excellent reasons wishes to maintain a fair degree of geographical distribution among its students, and one at which the tuition alone is nearly twice the maximum award, such scholarships are certainly a help but are hardly the whole answer.

Federal scholarships

Well, then, what about the Great White Father in Washington? We hear that he was recently frightened by a bear and is about to give out millions to train thousands of bright little Daniel Boones to clear the woods of varmints. It is true that the men on Capitol Hill got a scare—or at least an abrupt awakening—and as a result a number of Federal Scholarship bills have been presented in Congress. The one which has received the most publicity provides for 25,000 scholarships a year—or a total of 100,000 in all four undergraduate years when the plan shall be in full operation. Each scholarship carries a stipend of \$1000 a year.

There is now a college population of somewhat over 3,000,000, which the best estimates indicate will increase to 6,000,000 in 1970. Of the 3,000,000 presently in college probably at least 2,000,000 now need—or will need in the near future—scholarship aid in some amount. The ratio of Federal scholarships to those in need is therefore 1 in 20 and by 1970 it will be 1 in 40. It is true that as long as the varmints are in the woods there may be occasional increases in the

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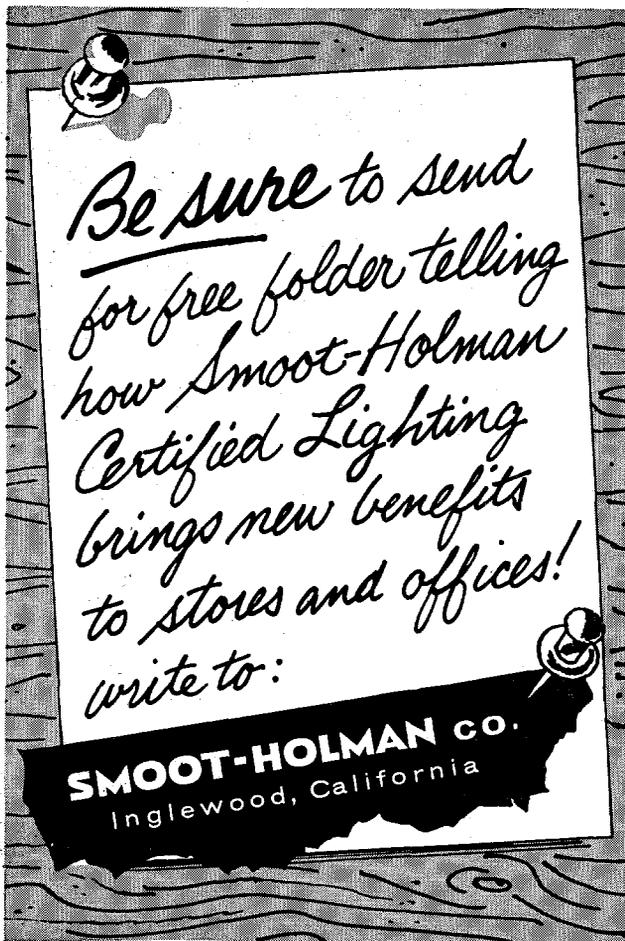
number and even in the amounts of the awards, but again I would be willing to gamble that those increases will not keep pace with the need.

But there is an additional and a very compelling reason why I do not want to rely on Federal scholarships. If I were asked by a man from Mars to state the basic difference between a democracy and a dictatorship I would reply that in the former the citizens are free to discriminate and some of them are taught to do so; whereas in the latter the people are permitted only to believe. The ability to discriminate is the basic requirement for reaching sound conclusions. It can be acquired only under conditions in which people are free to examine ideas. It can be taught only if the colleges and universities are uninhibited in their efforts to investigate, to weigh and to evaluate. To attempt to teach discrimination in an atmosphere in which in any area of human endeavor only one side of a question may be considered is a contradiction in terms. It is the most mentally emasculating experience to which any citizen can be subjected and can result only in flabby minds existing within a protective shell of authority.

I am not suggesting that the proponents of govern-

ment scholarships are plotting to seize control of education. I am not even objecting to Federal scholarships in the modest proportion now being proposed. I am trying to point out that if private citizens, private foundations, private corporations decline to support scholarship programs and leave this field entirely to the government, the colleges and those who attend them must sooner or later become government dependencies to some important degree. No matter how good the intention may be in the beginning, eventually the man who pays the piper calls the tune.

If this tune can be changed from day to day by public hysteria, public whims, enthusiasms and prejudices which cannot help affecting legislative bodies the colleges will not long be free. That is why I do not think that private citizens and private enterprise can afford to delegate their responsibilities in the field of education to the authorities in Washington, and it is why we in the colleges feel justified in turning to private sources for help in discovering and educating those to whom we must some day turn for leadership. That these people shall be ready when we need them is certainly to our mutual advantage.



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