SCIENCE

How Shall We Pay for Research and Education?

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Population trends in the United States during the past two decades, along with the changing public attitude toward higher education and research, have posed a predicament for our colleges and universities. The approaching tidal wave of increasing college enrollments—a wave that has already engulfed our lower schools and is lapping the shores of higher education—is giving administrators and governing bodies apprehension and anxiety. The predicament is the inadequacy of operating funds to keep abreast of the rapidly growing needs of the institutions (1).

The report of the Committee on Institutional Research (2) of the American Council on Education states as fundamental principles that "all accredited institutions of higher learning subscribe with varying emphases to three primary and essential aims: (a) the extension of the boundaries of knowledge; (b) the conservation of knowledge already acquired; and (c) the diffusion of knowledge through teaching, publication and other accepted methods of dissemination." It states further that "institutions of higher education are the principal instrumentality through which new knowledge is created by research scholars, existing knowledge is preserved and propagated through libraries and the minds of faculty members and students, and knowledge is disseminated through teaching and publications. In order that they may fulfill their primary and essential functions, institutions of higher learning require the utmost freedom in both their administrative and academic activities."

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That these principles are truly fundamental in our society is beyond argument. The preservation of the essential freedom of research and education must be assured. Is it, in fact, assured in the future, or is freedom threatened? If we consider seriously the aforementioned predicament, there is no escape from the view that freedom of research and education, in both its administrative and intellectual aspects, is indeed threatened.

Government agencies are supplying, in growing amounts, funds for scholarly research but not to support the teaching function and other primary and essential activities in higher education. If the rapidly growing demands on institutions should bring about increasingly unbalanced budgets, substantial federal support of all education would appear inevitable. Although present support by government of research activities seems to have no concomitant control or intrusion, these are appearing in subtle, though not insidious, ways. They develop almost spontaneously, without plan or intent, simply because the expenditure of government funds calls for safeguards against improper disbursement and for checks to insure proper use. The exercise of such authority of guardianship of funds almost invariably becomes bureaucratic and can easily develop sinister aspects. If federal aid to education, as well as to research, were to increase by large sums, we could not afford to remain complacent about the likelihood of increasing government control.

Thus, although federal subsidy appears to be a way out of one predicament, it immediately leads into another. Under the irresistible pressures that come with increasing demands on educational facilities, we are not only accepting but actively seeking more government money,

notwithstanding the probability that this carries with it increasing government intrusion and eventual control.

The situation, though serious, is not yet hopeless. A remedy is possible which keeps complete authority of management and direction in the hands of the governing and administrative heads of our schools and colleges, where it belongs, and does not permit it to pass under the heavy hand of some federal agency, where it might easily become lodged.

Dilemma of Colleges and Universities

From its very beginnings, our nation attached great importance to the education of its citizenry. Public policy called for schools, locally founded, supported, and controlled. Colleges in growing numbers were established. Some were privately started and run by religious organizations, some by secular groups, others by municipalities and states. Attempts were made to establish a national university, but the idea of federal support never took root. Indeed, strong sentiment prevails in the Congress, reflecting public sentiment, against federal subsidies for education, especially at the higher levels. Unless some better way is found soon, however, federal money for education may, by default, become the pattern for an attempted remedy for the present and impending difficulties.

Faced with the increasing pressure for more admissions, private institutions may and do take the position that they can accept only so many students, that they are under no obligation to take more, and that they will raise admission standards to limit enrollment. No one expects a college to carry a larger load than its resources allow. It may be suggested, however, that, as an institution organized to serve a public need, it may soon have to find means for expanding its capacity. As private institutions limit their admissions, the burdens are increased on those supported by taxes. Of the latter, many are under pressure and some are under compulsion to accept all qualified comers, the qualification being a high-school diploma. How can the schools, public and private, under increasing heavy demands, solve the dilemma? All of them should be expanding their facilities now to take care of future student population, which is expected to double in the next 15 years, and probably sooner.

By minor artifices we may defer, but cannot avoid, facing the problem: how shall we finance research and education? These are the solid foundation of the nation's future, and funds for their support must be adequate to provide superior opportunities for gifted students and able scientists. Greater knowledge and fuller understanding in all fields of learning must be the goal. No equal expenditure of money can bring greater returns for the public benefit. In no other way can we achieve the freedom that comes from knowing the truth. In no other way can we as a nation hold our own on this overpopulated planet. As we face the problem squarely, we find only one solution: assurance that a sufficient part of our vast national income will flow normally and effectively into education, to meet its financial needs as they arise.

In trying to bring this about, should we take the "easy" way? During the past couple of decades, a father complex seems to have come upon many of our citizens, causing them to look to Washington as the ever-present help in time of trouble, especially when money appears to be the remedy. Many people seem to think that money from the Federal Government does not cost anybody anything. The easy way then would be to look to the government to make annual grants to cover all operating deficits in education, under a formula by which funds would be doled out to all institutions, public and private.

To do this by statute would require a highly sophisticated law under which an attempt might be made to secure fair and just distribution, with effective safeguards against abuse. These are almost unattainable specifications. If they were attainable, and if easy money were meted out year after year, the institutions would lean more and more on federal support and depend less and less on their own efforts and resources. The disbursing agency would have the annual task of accurately and objectively budgeting the needs, beginning 2 years in advance; of gaining approval by the Bureau of the Budget; of getting the budgeted amount through the Congressional mill to an appropriation, with all the political implications of the process; and, finally, of disbursing the funds thus provided.

It is not a reassuring picture. A vast organization would be needed by the dispensing agency. It could easily become one of the greatest empire-building bureaucracies that the country has known. It would have to be vividly mindful of the fact that every college and university is in a Congressional district. Could the institution in such circumstances escape governmental intrusion in its affairs, or avoid a measure of eventual control from Washington? If we treasure our heritage

of freedom in thinking, in learning, in teaching, we cannot take the risk of traveling this way.

Private Support Is Needed

What, then, is the alternative? There is only one. The money needed to keep our colleges and universities solvent must be private, not public, money; and it must come from a great number and diversity of sources to assure complete independence from outside influence or control.

The efforts that are being made by friends of education to encourage and develop increased giving by corporations are commendable and should continue. Such gifts, though significant, cannot be more than a partial solution. Sentiment already exists against too large a fraction of the supporting funds being derived from business and industrial corporate sources. Even if it were feasible to get all needed support from them, strong antipathy against doing so would surely develop.

Desirable and helpful though they may be, gifts from business or industrial corporations are neither easy to come by nor easy to keep coming year after year. Boards of directors are trustees for the owners. They must be circumspect in either spending or giving away their stockholders' money. When the economic situation becomes unfavorable, prior actions are easily rescinded. Moreover, a large part of corporate aid is special-purpose money for specific projects or activities, to assure easy justification to stockholders. Although some special-purpose money can be well used, institutions would be hamstrung if the major part were of this kind. Keeping institutions in good balance in all fields of learning requires funds that, for the most part, are uncommitted.

In these considerations, then, there is left only one source for the kind and quantity of money needed. It is the individual whose income is enough to make him a potential donor. If he makes a federal income tax return, he is in this class. Of his kind there are many millions. He is a major source of the federal revenue. As a donor of gifts for the general welfare, especially education, he has not collectively distinguished himself. There are, to be sure, outstanding exceptions among individuals in all income classes, and their generosity is most heartening. But at the very best, the total of their gifts cannot now come near to meeting all needs. However generous, they cannot fairly be expected to carry the whole burden.

Although it may seem that our individual generosity is not notable, we are

Table 1. A table drawn to assist in explaining and illustrating how a simple revision of the income tax laws would operate to make the cost of giving commensurate with the giver's income.

I Group No.	II Highest surtax rate (%)	III "Gift sur- tax" (%)	IV Present cost of gift dollar (ct)
1	No surtax	2	80
2	20 to 31	3	80 to 69
3	32 to 41	4	68 to 59
4	42 to 51	5	58 to 49
5	52 to 61	6	48 to 39
6	62 to 71	7	38 to 29
7	72 to 81	8	28 to 19
8	82 to 91	9	18 to 9

in fact a nation of givers, and we are almost unique in this respect. Were we not collectively generous, our government could not, year after year, maintain its program of foreign aid for nonmilitary purposes. But we could not be collectively generous unless we were individually so. If, then, the present total of gifts for public causes is relatively low, the reason is to be found not in the individual's unwillingness but rather in his inability to be generous.

Income Taxes and Individual Giving

Notwithstanding the apparent unqualified approval by government of the taxpayer's charitable inclinations, expressed by its permission to him to deduct up to 30 percent of his adjusted gross income for legal charities, he failed in 1954 by about \$20 million to take advantage of this exemption. Deductibility of charitable gifts must, therefore, be regarded as a gesture, not empty but unrealistic. Under this seemingly generous provision the government exposes itself to possible loss of substantial revenue-namely, the taxes on the billions that the taxpayer might make as deductible gifts. Why has this provision failed so utterly to stir to vigorous action the generosity of individuals toward making gifts to worthy public causes?

Such gifts, approved by government, are called a *legal charity*. They are the "charitable contribution" now deductible from adjusted gross income in the computation of federal income tax. The term *legal charity* was superbly well defined in 1867 by Horace Gray, associate justice of the Massachusetts Supreme Court and later a justice of the United States Supreme Court: "A charity, in the legal sense, may be more fully defined as a gift, to be applied consistently with existing laws, for the benefit of an indefinite

number of persons, either by bringing their minds or hearts under the influence of education or religion, by relieving their bodies from disease, suffering or constraint, by assisting them to establish themselves in life, or by erecting or maintaining public buildings or works, or by otherwise lessening the burdens of government." (Italics are mine.) In view of the great number of government-approved legal charities, why have individuals declined by so wide a margin to make deductible gifts?

The answer is found in the glaring inconsistency between the government policy of approving gifts "to lessen the burdens of government" and its income tax laws. The curious if not startling fact is that the tax laws operate to increase greatly the ability to give of those whose income makes them most able to give and to diminish drastically the ability to give of those whose income already renders that ability low. The cost of giving for persons with a maximum surtax rate of 20 percent is almost 9 times that for those at the 91-percent maximum.

How does the disparity in the cost of the gift dollar arise? Consider one of the dollars given by the person whose highest surtax rate is 91 percent. It is tax-free. But if he had not given it, government would have taken 91 cents, leaving him 9 cents. Thus the dollar he gave cost him 9 cents. By like process, we find that the cost of the dollar for one whose highest rate is 20 percent becomes 80 cents.

Such disparity in cost of giving between those of low and high incomes, respectively, does not harmonize with governmental approval of giving as now expressed in the income tax laws. The zooming rise in cost of the gift dollar, with decreasing amounts of adjusted gross income, is a powerful deterrent, not an incentive, to liberality (see Fig. 1A). This has undoubtedly been a major cause of the restraint by the individual upon his generous inclinations. To the person with income in the thousands or low tens of thousands, there is a double deterrent to giving. The first is that, after living expenses and other normal obligations have been met out of the year's income, the surplus remaining for savings and gifts is small; thus the intrinsic value of his surplus dollar is large—relatively much greater than it is for his counterpart with large income. The second deterrent is the amount that the gift dollar costs him. The effect is to put restraint on his generous impulses and to make him take the position that the government had better use the taxes he pays to finance the public causes that seek his donations.

The inequity of the situation as it affects the individual who may wish to support worthy enterprises is clear, and its remedy is clear. The cost of the gift dollar to the person with low income should be no greater, and preferably less, than its cost to the wealthy donor. The cost of giving should be commensurate

with income. Giving should be possible for all taxpayers. With a well-designed plan for establishing the obviously fair principle that has been stated, there is little question but that greatly increased and probably adequate funds for all worthy public causes would be forthcoming. They would come from a substantial fraction of the 40 million people who now pay income tax on the basis of Form 1040, in accordance with their own choices and decisions. Such widely distributed giving is in the pattern of our tradition, an expression of the democratic process. It has been the mainstay of many of our necessary and valuable causes. With growing population, their increasing support becomes imperative. Education and research present the most immediate and most critical need.

Recommended Revision in Tax Laws

To remedy the disparity in cost of gift dollars under the income tax laws involves relatively simple mechanics. Several methods can be devised by which a positive incentive to giving would replace the existing negative one, and which would end the incongruity between the tax laws and the government's approval of giving. The simplest of those which I have considered is illustrated in Table 1 and Fig. 1B.

The plan contemplates classifying all who pay an income tax, other than those

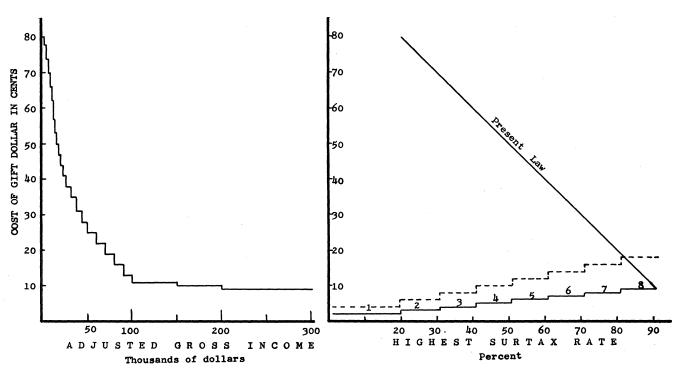


Fig. 1. (A, left) Cost of gift dollar in relation to adjusted gross income. (Data from Internal Revenue instruction pamphlet for 1954, p. 14, schedule I.) (B, right) Solid step-graph shows proposed gift surtax in Table 1, column III. Dotted step-graph shows same but with rates doubled. Numbers on steps indicate groups, column 1.

who use the standard deduction, in eight groups, as shown in column I. (For those with incomes under \$5000 who do not itemize deductions a modification of the plan is indicated.) Column II provides the basis, in terms of highest surtax rates used, for the classification. Column III is an illustrative set of percentages, one for each group, to represent a "gift surtax." Column IV shows the present cost of the gift dollar for each group.

Under this plan the income tax would be computed as it is now except that gifts would not be deducted from adjusted gross income before making the computation. The resulting highest surtax rate would establish the individual's group. His total donations, up to some limit, such as percentage of adjusted gross income, would be a tax credit, to reduce the computed gross tax by the permissible amount. Finally, the "gift surtax," column III, would be added. This would be the cost of the allowable gift in each of the respective groups.

As an example, suppose that the tax-payer is in group 5, that his computed gross tax is \$10,000, and that his gifts total \$2000. The gift credit, assumed to be within the permissible limit, reduces the tax to \$8000, to which is added the gift surtax of 6 percent of \$2000, making the final tax \$8120. His gift dollar has cost him 6 cents, as compared with the present 9-cent cost at the 91-percent surtax rate.

The table and example are intended to be illustrative only. Thorough analysis is needed to determine appropriate rates for the gift surtaxes and the limitations on tax credits. These would have to be established with some flexibility in administration by the Treasury Department, so that small adjustments could be made during an experimental period of several years. Limits on tax credits and percentages established for gift costs would constitute valves by which the flow of gifts is regulated.

Figure 1A graphically presents the cost of the gift dollar in relation to adjusted gross income, according to present laws. It is a striking illustration of the excessive cost of giving for those with incomes in the smaller number of thousands of dollars, as compared with the moderate cost for those with incomes ranging from the upper tens to hundreds of thousands. Figure 1B shows the present relation between cost of the gift dollar and the highest surtax rate and the same relation under the proposed plan.

The essence of the scheme is simple. At present the gift dollar costs the donor the amount shown in column IV of

Table 1. Under the proposed plan it would cost him, in cents, the amounts shown as percentages in column III. This makes giving no less attractive than under present laws for the wealthy, but makes it much more feasible and hence more attractive for those with moderate or small incomes. The change in laws would give the many millions in, say, the lower four groups an opportunity that they are now virtually denied: to participate effectively in truly democratic support of education and other public enterprises.

That there will be strong objections to the plan may be surmised, and some of them are easy to anticipate. One comprehensive answer to any objection is that for education there is no possible third choice; either the mounting deficits will be financed by government, or they will be met privately. If the plan here proposed is not the answer, we face the challenge of devising a better answer. A decision must be made and action taken promptly, because the situation is critical and becoming worse.

There will be great reluctance in some quarters to do anything that might reduce gross public revenue. But we must look at the net decrease, and, whatever it may be, it will be a low price indeed for the benefits to be derived. Here is a plan that would avoid not only the cost but the adverse political aspects of the channeling of funds through government. The gift dollar would reach its destination with its value intact. If it is forced through government channels, its value is reduced by one-half or more. Since in either case the money comes from the taxpayer, the saving made in eliminating government operations would leave his income after taxes higher, on the average.

One objection raised is that a plan of this kind would be putting the expenditure of public funds in the hands of private individuals. The reply is that the possibility exists now, in the permissive deduction up to 30 percent of gross income for gifts. In principle, there is no change; in operation there is. It would not only introduce realism into the expressed approval of giving but would assure a distribution of the gifts in accordance with popular decision. The many millions of donors would constitute a valid statistical sample of the entire population. Hence their collective good judgment could be implicity trusted, as experience and history prove. At any rate, it is not inferior in wisdom to that of a central disbursing agency.

.Should it appear that the more emotionally motivated giving to some causes

provided funds disproportionate to the needs, the controls built into the plan could be operated selectively. Obviously any plan must be wisely administered. Amendments to the income tax laws will always embody safeguards against abuses; the Congress will see to that.

In its most important positive aspects, once the details of the plan were wisely developed and set in operation, it would solve the deeply rooted problems of education for the long term. As population and the need for more funds for education grow, the flow of support would similarly increase. It would help to solve the immediate problems of the school districts, the colleges, and the universities. There would be adequate funds for research on disease and public health and for the support of the basic research which is one of the primary responsibilities of the institution of higher education. Community funds would benefit immediately, as would the Red Cross. Religious charities would become better able to carry on their humanitarian efforts among the underprivileged, the ill, and the disabled.

Apart from the substantial quick and long-term relief that would be provided the elementary and secondary schools, and the easement that the plan would offer higher education and other qualified causes, there is an aspect of even greater significance. Where the gift dollar goes, the giver's interest follows. His interest continues as he sees the dollar to its destination and observes the intended beneficial results. On the other hand, if the money thus to be used eventually is paid to the collector of public revenue, a curtain is dropped at that point against the taxpayer's further interest in his dollars, for their destination is now obscured. No better way has appeared to stimulate a citizen's interest, and to encourage him to become active in public causes, than to make possible his financial participation in them. He becomes a better citizen. We can, in the manner suggested, make millions of better citizens. It is the way our democracy has worked in the past. This great and valuable asset to the success of our democratic process can be recaptured by making it possible once again for many millions of citizens to participate in private giving, in accordance with their own decisions.

References and Notes

- The opinions expressed in this article are entirely my own; they reflect no official position of the National Science Foundation.
 Committee on Institutional Research, American
- Committee on Institutional Research, American Council on Education (Washington, D.C., 1954). Known as the Hancher Report.