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ABSTRACT
                This paper discusses questions regarding standards
used by the College Scholarship Service (CSS) to measure expected
parental contributions to their children's college education. It
deals with problems regarding establishment of low and moderate
budget levels, family size, discretionary income, and alternative
measurement procedures. After extensive discussion of proposed
changes in CSS procedures, it is recommended that the current CSS
curves of expectation be extended downward to provide for a negative
contribution. (JS)

CSS

Some Thoughts and Reflections
Regarding Parental Ability to Pay
for Higher Education

James L. Bowman

December, 1970

COLLEGE SCHOLARSHIP SERVICE

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SOME THOUGHTS AND REFLECTIONS REGARDING

PARENTAL ABILITY TO

PAY FOR HIGHER EDUCATION

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December   1970

"The time has come, the walrus said,
to speak of many things-- of shoes and
ships and sealing wax, of cabbages and kings..."

To be more specific, the time has come to speak about the CSS
levels of expected parental contribution toward the cost of higher
education. In many respects, I'm beginning to feel that I have been
through the looking glass with Alice and am now in a position that is
somewhat analogous to the Mad Hatter's tea party, where everything
was topsy turvy and nothing appeared as it really was!!

Considerable comment is presently heard regarding the CSS expected
parental contribution levels--particularly those above the point at
which a contribution of $1,800 would be expected (a range in effective
income from $9,110 for the one-child family to $19,220 for the ten-child
family). The troublesome aspect of the comments is that there are two
different camps. On the one hand, many high-cost, private institutions
say that the expected parental contributions for families above these
income levels are too low. These institutions maintain that they are,
in effect, subsidizing family consumption of other goods and services.
On the other hand, many high-cost, private institutions also say that
the expected parental contributions are too high for families above
these income levels, and that students from these families would be
unable to attend their institutions if the CSS analysis was strictly
used. Economists, interested in social welfare, are also expressing
concern that the whole concept of relative need and the CSS curves is
inappropriate (particularly with respect to public sector funds) because
some believe that aid is offered to students from families with higher
income levels. This would mean that a lesser amount of total aid funds
would be available for students from the lower income groups.

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In addition, concern is being expressed over the appropriateness
of the current CSS levels of the lower and moderate budget standards.
At the time the current budget standards were adopted, the levels were
based on the three standards of living for an urban family of four
persons, spring 1967. The published levels were updated for spring 1968
price levels and modified to provide equivalent levels of living for
families of different sizes. From the price levels in effect between
April 1968 and April 1970, the consumer price index (CPI) for all items
had increased 13 percent and continues to increase at an annual rate of
about 6 percent. No changes have been made in the CSS curves to reflect
this change in the cost of living, and, consequently, the standards
currently used by CSS are out of date.

The same dichotomy appears to exist with respect to the differences
in parental expectations for families of various sizes. There are
institutions (particularly the ones having a significant proportion of
large-size families in their population) who feel that insufficient
allowance is made for the number of children in a family, and that the
resulting expected parental contribution is too high. Conversely, there
is equally strong feeling that the current differentials are too great
and, therefore, the expected parental contributions are too low. As has
been pointed out by Gertrude Weiss and me on several occasions, "...family
size difference is one of the major problems associated with use of BLS
data (or any consumption data, for that matter). Families with four or
more children are so small a proportion of the total that any population
sample on which statistical work is based cannot deal with them..."[1]

As we attempt to ameliorate the conflicting viewpoints that have
been expressed regarding the CSS parental expectations, is it any wonder
that we begin to feel like a participant in the following conversation:

"'Will you tell me which way I ought to go from here?'

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[1] James L. Bowman and Gertrude S. Weiss. Expected Contribution Toward
Educational Costs: Suggested Revisions for 1969-70. Princeton, New
Jersey: Educational Testing Service, September 1969, p. 16.

'Depends on where you want to get to,' replied the
Cheshire cat.

'Well, I really don't very much care,' replied Alice.

'Then, it doesn't matter much which way you go,' said
the cat."

While at this point we really can't say where we want to "get to"
on the question of parental expectation with any degree of certainty,
we can explore the concepts behind "where we are at" and to suggest
possible changes in the CSS curves for the committee's consideration.

At the outset, it may be advantageous to review the concept of
discretionary income and the changes that have occurred with respect
to the expected parental contribution from this source of income since
the revision in the original CSS concepts in 1962. The 1962 revisions,
which were generated by much the same comments as seem to be voiced
today, were sparked by increasing concerns from the membership that the
expectations from incomes below $6,000 were too high and expectations
from incomes above $12,000 were too low. Since objective data were
lacking, the marginal taxing rates that were developed were necessarily
based on pragmatic, procedural decisions by the CSS Subcommittee on
Computation. These decisions produced results generally considered
desirable by the CSS participants who had expressed their feelings on
this issue.[2] The percentage tax rates that resulted are shown in the
following table:

PERCENTAGE TAX ON DISCRETIONARY INCOME
BY SIZE OF FAMILY
1962

Discretionary Income	Number of Children				
	1	2	3	4	5
First $1,000	28%	25%	22%	21%	20%
Second $1,000	31	29	27	26	25
Third $1,000	35	33	32	31	30
Fourth $1,000	38	37	37	36	35
Fifth $1,000	42	41	41	40	40
Sixth and each succeeding $1,000	45	45	45	45	45

[2] Financial Aid Manual, 1962-63 Edition. College Scholarship Service, p. 47.

As is evident, the marginal rates of contribution were highly progressive with respect to income. One reason for the high degree of progressivity was that the Subcommittee on Computation felt the revisions in the expectations should not change the aggregate amount expected from families in the CSS population. As a consequence, the expectations from discretionary income were fixed mathematically so that the aggregate financial need of CSS filers was the same as had existed prior to the revisions. At that time there was no thought or plan for a large scale increase in available financial aid resources from governmental sources. The question which faced the Subcommittee on Computation was rather how should existing resources be most fairly divided among applicants. The result was that the pie remained the same but was sliced in a different manner.

The updating of the moderate level of income and the establishment in 1965 of new points of minimum expectations did not affect the marginal rates of contribution from discretionary income. As was pointed out at the time:

> "...adoption of the recommendation...(relative to the new
> moderate and poverty income points)...will have the effect
> of spreading the present curves of expectation from income
> over all income levels. No changes in the shape of the
> curves are derived by the marginal rates of contribution
> from income as discretionary income increases and is a
> problem separate from that involving determination of a
> poverty level of income and the development of an increase
> level approximating a 'moderate' level of living. Consequently,
> until such time as the marginal rates of contribution from
> discretionary income can be studied..., we recommend that
> the present rates of contribution be utilized for income
> levels above the 'moderate' level."[3]

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[3] James L. Bowman and Gertrude S. Weiss. Suggestions for Adapting CSS Procedures for Use with Low-Income Families. Princeton, New Jersey: Educational Testing Service, April 1965, p. 6.

By 1966 it was the general feeling that the taxing rates from discretionary income, developed by "pragmatic, procedural decisions of the Subcommittee on Computation", were no longer appropriate. Increasingly, higher education was being viewed as a right and not a privilege. The Higher Education Act of 1965, together with continued growth in state programs, had broadened financial aid resources at institutions. Of great importance, too, was the continued spiral in college costs. The net effect was that the existing taxing rates were expecting unreasonable contributions from discretionary income, contributions that were not contemplated or visualized in 1962. An expectation of $2,800 toward college costs has little meaning to a family earning $13,000 if the actual costs of attending an institution are $1,800, for the "ceiling of contribution" is established at what the family must actually pay. On the other hand, as the costs of attending college rise, so does the effective "ceiling of contribution." The $2,800 expected contribution now becomes real if the college costs are $3,000.

As was pointed out at the time:

"...that some revision of the current levels of expectation
is required, there is no doubt--but what should determine
the expected levels of contribution? To answer this with
exactitude would require extensive data regarding motivations,
family attitudes, exact costs and other data which, unfortunately,
are not available..."[4]

On the other hand, it was pointed out that extensive data existed on general consumption patterns of American households, and it was proposed that CSS expected contributions from discretionary income be derived from spending patterns of families' own discretionary purchases.[5]

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[4] Gertrude S. Weiss and James L. Bowman, A Proposal for Modification of the Curves of Expectation. Princeton, New Jersey: Educational Testing Service, November 1966, p. 3.

[5] Ibid, pp. 3-5.

Analysis of the consumption data contained in the Survey of Consumer Expenditures, 1960-61,[6] indicated that, generally, for families within the income ranges of $8,000 to $15,000, expenditures of a discretionary nature (for example, food away from home, education, recreation, automobiles, consumer durables, gifts, contributions, and savings) followed a pattern that allocated an increasing share of expenditures to those items as income increased and provided an "expenditure elasticity coefficient" of approximately 2.0.

It was proposed, in order to avoid arbitrary establishment of marginal taxing rates, that a third income point (to go with the previously established points of no contribution and the $800 maintenance contribution) be determined at the level where a contribution/income elasticity of 2.0 would result. In essence, this means for each doubling of income (100 percent increase), parents' contributions should be tripled (200 percent increase). A series of income points at which a $2,400 contribution would be expected was devised for various family sizes, using the effective moderate level of income and the $800 maintenance contribution as the bases.

This approach was similar to the philosophy of the then existing taxing system in that it involved appropriating increasing shares of discretionary income for education. It did, however, provide a more gradual progression in taxing rates, for the relationship between income points was linear and the marginal rates derived applied to larger segments of discretionary income than was true in the 1962 formulations. The result was a reduction in expected parental contributions from those families with discretionary income:

> "...in the upper-middle income ranges, from $10,000 to $17,500,
> the average contribution under the proposed system has decreased
> some $200 to $600. Above $17,500, the expected contribution has
> decreased markedly--this will have little effect on parents in
> this bracket, however, since the 'effective level of contribution'

[6] Survey of Consumer Expenditures, 1960-61. BLS Report No. 237-38, April 1964.

(dictated by the actual costs of attending an institution) are for all but a handful of institutions below the proposed contribution level. It is analogous to saying that a family has 'no need' (assuming a $3,000 budget) by $2,000 or by $600-- under either criterion the family is presumed capable of providing for the educational costs without the assistance of financial aid..."[7]

A further reduction in expected contribution from discretionary income occurred as a result of updating the moderate income points to account for changes in the cost of living. This change, which became effective with the 1968-69 processing year, generally reduced contributions from discretionary income by $200 for the one-child family to about $400 for families with five or more children.

By 1969, as the cost of living continued its steady climb and as the costs of attending institutions of higher education continued to spiral upward, the situation faced by the CSS in 1961-62 was repeating itself. That is to say, there was a general feeling by financial aid officers that the CSS expectations from lower-income families were too high and those expected of higher-income families too low.

The first situation resulted from the fact that increases in the cost of living had exceeded the increases in the moderate standard made by CSS in 1968. In the case of the higher income families, the increase in college costs since 1967 had raised the "effective level of contribution" and families that were "no need" before were showing some evidence of financial need at high-cost institutions.[8] This, of course, was aggravated by the newly adopted procedures for treating families with more than one child in college.[9]

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[7] Weiss and Bowman, A Proposal for Modification of the Curves of Expectation, op. cit., p. 7.

[8] Bowman and Weiss, Expected Contribution Toward Educational Costs: Suggested Revisions for 1969-70, op. cit., pp. 12-13.

[9] James L. Bowman, An Alternate Approach to the Treatment of Educational Expenses for Additional Children Attending Institutions of Higher Education, A Proposal. Princeton, New Jersey: Educational Testing Service, November 1967.

As a result of these concerns, the CSS levels of expectation were
revised in accordance with recently available data from the Bureau of
Labor Statistics.[10] In 1969, the three budget standards (low, inter-
mediate, and higher) were incorporated into CSS procedures, producing
the following effective income points:

Number of Children	Effective Income Level at:		
	Low	Moderate	Higher
1	$4,460	$ 6,660	$ 9,110
2	5,570	8,250	11,400
3	6,550	9,700	13,400
4	7,350	10,880	15,030
5	7,800	11,550	15,940
6	8,250	12,210	16,850
7	8,650	12,740	17,580
8	8,920	13,200	18,220
9	9,180	13,600	18,720
10	9,410	13,930	19,220

After establishing new income points, revised expected contributions
were developed for each standard of living, as follows:

Low standard	$ 200
Moderate standard	900
Higher standard	1,800

By adopting the BLS standards and the related levels of income and
expected contributions, CSS was able to develop a table of expected
contributions based upon a series of income points derived from a common
standard and pricing procedure, a situation which had not been previously
possible. For incomes above the level indicated by the high standard,
the use of a point elasticity technique was continued. The fourth income

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[10] Three Standards of Living for an Urban Family of Four Persons. BLS
Bulletin No. 1570-5.

point was determined by using a point elasticity of 2.5 and the income and contribution levels of the high budget standard as the base. Adopting this procedure gave rise to a longer marginal taxing rate than was true under the original 2.0 elasticity concept and a concomitant increase in expected contribution. The effects of the changes on parental expectations were in accord with the then prevailing views of the using institution. Generally, for lower-income families, the changes reduced the expected contribution by approximately $200 on the average. For families in the middle ranges of income, the contribution remained essentially the same. For families in the higher income ranges, the expectations were sub- stantially increased.[11]

With this information as background on the various developments that have affected the CSS levels of expected parental contribution over time and that have produced the current CSS curves, we can consider what future changes might be appropriate. The existing dichotomy with respect to the level of parental expectation from discretionary income is not one that is easily resolved. Serious consideration must be given (and is, through the work of the Cartter Committee) to clarify the role of CSS with respect to its needs analysis system and the concepts of the amounts parents ought to be expected to pay toward the costs of higher education. If the role of CSS is to serve as a national standard of objective measurement of ability to pay for higher education, then standards must be based upon the best available economic evidence of ability to pay and should, to the maximum extent possible, avoid subjective determination. On the other hand, if its role is to serve as a rationing device for available financial aid funds and to assist in the admissions problems of its user institutions, then standards must be dictated by considerations other than objective economic evidence. In the final analysis, it is not easy to make the distinctions that have just been set out. Many times the exact data required are not available

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[11] Bowman and Weiss, Expected Contribution Toward Educational Costs: Suggested Revisions for 1969-70, op. cit., p. 14 ff.

and subjective determination must be exercised. It is felt that much
of the current dichotomy is the result of the different roles in which
CSS is viewed. Since 1964, CSS has attempted to restate the needs
analysis system and base the levels of expectation in relation to
current economic concepts and the best available evidence on parental
ability to pay for higher education. In essence, CSS has set standards
by which objective measurement could be made of the amount parents could
reasonably be expected to contribute toward the higher education expenses
of their children. I say reasonable expectation because, unlike a public
taxing system, there is no way parents can be forced to make the contri-
bution suggested. The law of the marketplace still operates -- if the
price seems too high, consumer choice will be exercised and families
will substitute low-cost colleges for high-cost colleges in order to
minimize their real contribution. It is this very factor which creates
the feeling that the current expectations from discretionary income are
too high. The current admissions crisis in many high-cost private
colleges is caused by consumers being unwilling to make the "real"
contribution that is expected of them to attend a particular college
and by substituting public, relatively low-cost institutions where their
"real" contribution is substantially less. Since most of the high-cost
private colleges base their financial aid decisions on need, in essence
they are saying:

> "Parents are unwilling to make the real sacrifice that
> your curves impose upon them if they want to come to
> our college. Since they have no need, we can't give
> them any financial assistance. We want very much for
> their children to come to our institution. Consequently,
> you should change your curves because parents won't
> contribute that amount; then they will have financial
> need and we can offer them financial assistance and,
> hopefully, they will come to our institution."

The College Scholarship Service Council, the governing body of the College Scholarship Service Assembly, considered this dichotomy and reiterated its contention that the role of CSS is to serve as a national standard of objective measurement of ability to pay for higher education. The following passage from the transcript of the meeting is indicative of the feeling of the Council members at the time:

> "...the need analysis system has to be responsive to our best efforts to clearly analyze what a given family is able to pay. That makes us a national yardstick in making some assessments along that line. (If) this system becomes (a rationing device)...a fast way of justifying a lack of funds or a fast way of justifying giving money to a family that may not need it--then we ought to all close shop quickly.
>
> We cannot be, I don't think any national group can be, a rationer of funds and attempt to falsely make up for what isn't there. It would be the most hypocritical act that this service could perform."[12]

At any rate, some suggestions, based on the present state of the economy, can be made with respect to the current CSS procedures and related expectation levels that may tend to ameliorate some of the differences of opinion regarding the contributions that parents are expected to make.

The United States is in the grips of the worst inflation in twenty years, and the end is not in sight. The data that form the basis for the current CSS levels of expectation are based upon the price level that prevailed in the spring of 1968. Since that time, the CPI has increased approximately 13 percent as of spring of 1970, and continues to increase at an annual rate of about 6 percent. As a consequence, consideration should be given to increasing the present budget standards (low, moderate, and higher) to reflect the significant change that has

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[12] Minutes of the College Scholarship Service Council Meeting. New York: September 14-15, 1970, p. 287.

occurred in the cost of living. Inasmuch as the CPI continues to increase--
and the fact that some time lag will occur before implementation of any
new levels of parental expectations--it is recommended that the current
levels be increased by a cost of living factor of 20 percent. By following
this procedure, and using updated family size differences, the following
effective income points (income after taxes) for various size families
would result:

Number of Children	Effective Income Level at:		
	Low	Moderate	Higher
1	$ 5,810	$ 8,610	$12,31C
2	6,680	9,900	13,680
3	7,680	11,390	15,320
4	8,550	12,670	16,960
5	9,080	13,460	18,060
6	9,620	14,260	19,020
7	10,020	14,850	19,700
8	10,350	15,350	20,250
9	10,620	15,740	20,660
10	10,890	16,140	21,070

Having established new effective income points at the three budget
standards, it is necessary to determine what the expected contribution
should be since all families have an equivalent level of living. For
the moderate level, maintenance cost estimates are derived by working
backwards for the increases in the budget as family size increases.
For example, budget costs for a family of three with a college-age
child are estimated at $7,920; for a family of four, at $9,900. Accord-
ingly, this extra person "costs" $1,980. As family size increases, the
added cost decreases. The fifth child, for example, increases budget
costs by $800. In order to provide a standard contribution for equivalent
incomes at different family sizes, a weighted average budget change has
been developed using CSS families as the population weights. The weighted
average budget change for the different family sizes comes to $1,440.

Following current CSS procedures of taking three-fourths of this amount
for a nine-month required maintenance would provide for an expectation
of about $1,080. Consequently, at the new moderate standard, a required
maintenance contribution of $1,100 should be expected.

The next question becomes: What should be the expected contribution
at the low standard and higher standard? It is proposed that a $300
contribution be expected at income levels of the low standard and that
this become the new base contribution expected by CSS. For families
falling below the low-income standard, no contribution should be expected.
At these levels of income, assistance to the child at school is most
likely to take the form of continuation of a small allowance and some
assistance with clothing purchases. These contributions, both in cash
and in kind, are estimated at $300 for incomes at this revised low-budget
standard.

Above the moderate standard, a more affluent and comfortable level
of living prevails and additional support for the child may be expected.
On the basis of changes in budget levels as families increase their
living standards, it is estimated that an additional $1,300 could be
expected at income levels approximating those at the higher budget standard.

By using these procedures, the following expected contributions at
each of the three standards of living would result:

Low standard	$ 300
Moderate standard	1,100
Higher standard	2,400

Revising the effective income points by the cost of the consumer
price index and substituting the revised expected parental contribution
at each of these new budget points would produce the following reduction
in parental contributions from the current CSS levels of expectation:

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Number of	Reduction in Parental Contribution at:		
Children	Low	Moderate	Higher
1	$350	$530	$980
2	190	270	300
3	150	210	40
4	140	200	0
5	140	200	0
.	.	.	.
.	.	.	.
.	.	.	.
10	140	200	0

Revising the three budget points by the change in the CPI produces
significant reductions for income levels below those at which a $2,400
contribution can be expected. At the high budget standard, there is
little or no change in the expected contribution for families with three
or more children. This occurs because the increase in the CPI is offset
by the revised family size differences being used.

It should be noted that the reduction in parental contribution
resulting from adjustments in the cost of living index may have a
perverse effect on the distribution of financial aid funds. To the
extent that financial aid funds are limited, reduced family contributions
make it difficult for financial aid officers to assist all needy students.
The contention has recently been raised that any reduction in family
ability to pay reduces the amount of financial aid funds available to
disadvantaged students. This effect was pointed out at the CSS Colloquium
on Financing Equal Opportunity in Higher Education held in the fall of
1969:

> "...within this stringent national picture, the net effect of
> the changes that took place between 1966 and early 1969 in
> the CSS family contribution tables are understandable, but,
> nonetheless, worrisome. They are understandable because

whatever objective rationale may lie behind them, their
greater generosity towards middle-income families puts
many hard-pressed private colleges in a better position to
compete financially with nearby public institutions for
relatively prosperous students, and yet these changes do
not violate the notion that scholarship stipends should be
based on nationally computed financial need. But this
understanding should not obscure the fact that if private
colleges generally follow the changes implied by the new
tables and award larger individual scholarship stipends to
students, and if no major new scholarship sources are forth-
coming, those changes in the CSS tables have made it signifi-
cantly more difficult for private colleges to aid larger numbers
of disadvantaged students..."[13]

This trend continues, of course, with the changes in expected
parental contributions that are suggested by the change in the consumer
price index. To the extent that parental ability to pay has been
diminished due to changes in the economy, such a fact must be noted.
How else can CSS serve as a national standard of objective measurement
of ability to pay for higher education? How else can the gap between
what is available as total financial aid funds and the aggregate need
for such assistance be noted? The fact that changes in parental
contribution may reduce the amount of aid available for disadvantaged
students in the absence of increased aid sources is a matter for institutional
policy. Ideally, all students with indicated need should be assisted by
financial aid funds. However, in the absence of sufficient aid funds,
the criteria must be that those students with the greatest indicated
financial need are assisted first.

For families with incomes above the high standard, economic data
regarding spending patterns do not exist. Consequently, any decision

[13] Humphrey Dorrmann, "Financial Aid for Disadvantaged Students in
Private Universities," Financing Equal Opportunity in Higher Education.
New York: College Entrance Examination Board. 1970. p. 29.

as to the amount that should be expected from families above the high
standard (the point of $2,400 contribution) must necessarily be some-
what pragmatic.

In addition to the concerns that have been expressed regarding the
level of parental contribution from discretionary income there have been
comments regarding the differences in parental contributions for families
with many children. Specifically, the question has been raised that
insufficient weight has been given to the concept of "equality of
sacrifice." It is not necessary to belabor the point as to what is meant
by a state of equal sacrifice -- at least three distinct concepts have
been advanced in taxation theory; i.e., equal absolute sacrifice, equal
proportional sacrifice, and equal marginal sacrifice, each requiring a
different taxing pattern.[14] Mainly, the question falls in the realm of
equal marginal sacrifice.

The question that has been raised emphasizes the fact that the
family size differences used by CSS are carried out over the entire
income spectrum. This gives rise to "curves of expectation" that tend
to diverge as income (and family size) increase. The criticism is that
at some point along the income spectrum the marginal cost of the nth child
is zero, and, consequently, there should be no difference in the expected
contribution from the yth dollar due to the number of children.

The differences in the current CSS curves are solely a function of
family size. Family size influences the income levels at which discretionary
income is considered to be available, and it also influences the amount that
is expected to be contributed out of that discretionary income.

Family size difference is one of the major problems associated with
use of BLS data (or any consumption data). Families with four or more
children are so small a proportion of the total that any population
sample on which statistical work is based cannot deal with them. Even
the CSS population has only 30 percent of families with four children or
more, less than 15 percent with five or more children. Moreover, the
statistical work on family size is not completely satisfactory.

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[14] For an excellent summary of the sacrifice principle in ability to
pay theory, see Richard A. Musgrave, A Theory of Public Finance.

The BLS method of determining family size differentials is based
on the assumption that families have equivalent incomes when they
spend the same proportion of income for food.[15] The Orshansky method[16]
(currently being used by CSS for establishing family size differences)
also depends on food costs, namely, that equivalent incomes are those
which cover food costs when the same percent of income is spent for food.
Thus, both depend on food costs or expenditures as a percent of the total.
This is increasingly unsatisfactory as incomes go up and percent of food
declines for the country as a whole, as well as for application at the
higher income levels. Either method (BLS or Orshansky) shows generally
similar results for families up to five children. Ideally, the expectation
for larger-size families should be shown as "five or more," particularly
since the rate of increase with family size decreases as you move along
the scale. In order to provide family size differences for families
with six or more children, it is necessary to extrapolate by pragmatic
procedures.

The problem of the differences is aggravated by the use of the
elasticity concept of determining expected contributions from income
above the higher budget standard. In using the income points at which
the high standard is included and the $2,400 contribution level as the
base points for applying point elasticity, essentially the same differences
are maintained throughout the entire curve spectrum. In addition to the
differences in the income levels at which the high budget standard is
reached for families of different size, there is a different marginal rate
of taxation (or rate of expected contribution) due to the differences.
For example, the marginal rate of contribution for income above the high
budget standard for a one-child family is 49 percent but for a ten-child
family it is 23 percent. That is to say, for every dollar above the
high budget standard, the one-child family is expected to contribute
49 cents while the ten-child family is expected to contribute only 23

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[15] Revised Equivalence Scale for Estimating Equivalent Incomes on Budget
Costs by Family Type. BLS Bulletin No. 1570-2. November 1968.

[16] Mollie Orshansky, Counting the Poor: Another Look at the Poverty
Profile. Social Security Bulletin, January 1965, pp. 3-29.

cents. In this regard, the CSS contribution system is different from the federal income tax system. In the latter case, family size differences are considered by using exemptions to reduce taxable income, but only a single rate structure is used in determining the amount of tax to be paid. In contrast, CSS can be regarded as having ten different exemption schedules and ten different rate structures. It is for this reason that the CSS curves do not parallel each other and will only converge at a level of income far above the "no need" level (under the elasticity concept the curves become "backward bending," where for every additional dollar of income you are expected to contribute more than a dollar in tax; this is, of course, extreme disutility of income!!).

It is possible to modify the current CSS procedures to take into account the concept of "equal marginal sacrifice," and this could be accomplished by using a system of measuring parental ability to pay analogous to the federal income tax structure. This methodology would require the development of taxing rate structure for determining the contribution from various levels of income. As to what the rate should be -- there is no definitive answer. It would have to be developed by somewhat pragmatic means. This was a situation which CSS hoped to avoid in 1965 by using the elasticity concept to develop marginal rates of taxation based upon expenditure patterns of American households. Since this concept has broken down to some extent for families in the upper income levels (due to the fact that no information exists on how such families spend their money) and the elasticity ratio has been changed arbitrarily, it might be appropriate to consider an alternative approach.

Such an approach could be provided by retaining the three budget standards of the Bureau of Labor Statistics to determine expected parental contribution for incomes below those at which a contribution of $2,400 is expected, and utilizing a single, progressive tax rate schedule for incomes above the high budget standard. This would provide a methodology of determining parental ability to pay analogous to the principles embodied in the federal income tax system and in many of the state taxing systems.

In the federal taxing system, distinction is made between families
of various size by the use of an allowance for each family member claimed
for income tax purposes. It should go without saying that a flat exemption
allowance per person does not bear any relationship to differences in cost
between families of varying sizes, but arises solely from acts of Congress.
In 1913, when the modern income tax laws came into effect, a single person
had an exemption of $3,000 and a couple had $4,000. The exemption for
dependents, originally adopted in 1917 at $200, was increased to $400 in
1921, reduced to $350 in 1942, raised to $500 in 1944 when all personal
expenditures for taxpayers, their sponsors, and their dependents, were
made uniform. In 1948, the personal exemption was increased to $600
where it remained until the Tax Reform Act of 1969 provided for the
current scheduled increases.

In the approach being proposed for the CSS, family size differences
would be taken into consideration via the three BLS budget standards.
At the high budget standard, ranging from an effective income of $12,310
for the one-child family to $21,070 for the ten-child family, different
size familes are presumed to have the same equivalent levels of living.
For incomes above those established by the high budget standards, the
expected parental contribution toward educational costs would be determined
by a single, progressive tax rate schedule. At these points, the curves
of expectation would begin to parallel each other, since the shape of the
curve (the marginal taxing rate) would be identical for all family sizes.

The next question becomes: What pattern of marginal taxing rates
should be used in measuring parental ability to contribute from income
above the high budget standards? Such rates could be established by
pragmatic means to produce results that would seem generally appropriate.
It is hoped that such action can be avoided. An alternative approach
would be to use the elasticity concept to derive the initial marginal
taxing rate above the high standard, and then to increase the marginal
rates at an increasing rate in order to provide a progressive rate
schedule. Following this procedure and using an elasticity ratio of

2.5, the average of the five- and six-child levels of income at the high budget standard (the mid-point of the CSS family size distribution) produces the following marginal rates of expected contribution from income:

Income Above the high Budget Standard Levels:	Marginal Rate of Contribution
First $1,000	35%
Second 1,000	39%
Third 1,000	44%
Fourth 1,000 and above	50%

This proposed approach would mean that the two-child family would contribute $2,750 at an effective income level of $14,680 ($2,400 from income below the high budget standard of $13,680 and $350 from the $1,000 above this level). Similarly, the ten-child family would contribute $2,750 at an effective income level of $22,070 ($2,400 at the high budget standard of $21,070 and $350 for the $1,000 above this level). Under the proposed approach, there is an equal marginal sacrifice on the nth d ilar above the amounts at which equivalent levels of living have been established.

If the recommendations are accepted, an analysis of the changes in contribution that would result for selected families and income levels can be made. Generally, for lower and middle income families, the expected contribution will be reduced. For families in the upper middle income levels, the contribution will be increased. This is particularly true of families with many children because of the use of updated family size differences in measuring equivalent incomes.

Heretofore, we have been extensively discussing proposed changes in the CSS system that affect parental contribution in the positive sense. However, the concept of vertical equity would suggest that changes should also be considered that would affect parental contributions in a negative sense.

The CSS has developed elaborate standards, widely applied throughout the country, for determining how much a family can be expected to contribute

toward the costs of higher education. At the present time, this is
gradated down to the point where no contribution can be expected from
the family. After that, no further gradation occurs.

For instance, the proposed revisions in the low standard for a
two-child family means that such a family with income of $6,675 would
be expected to make no contribution toward the expenses of college
attendance. But a family who has even less income is implicitly
considered to be in exactly the same kind of situation. They, too,
are not expected to contribute and are not expected to have greater
need for assistance. It would seem reasonable, however, to look at
the income levels suggested by the low-budget standard as those levels
where parents can afford no contribution toward the explicit costs of
college attendance (the traditional "budget" costs used in financial
need analysis). If the family income is even less than this, it is
reasonable to suppose that they cannot even afford the implicit costs
of college attendance. Implicit costs are assumed to be those associated
with the provision of a suitable wardrobe, furnishings for dormitory
rooms, and other items normally associated with students coming from
middle class backgrounds. A family earning $6,500 and a similar family
earning $3,000 are not in equal financial circumstances, and it would
be an improvement in vertical equity to treat these two families unequally.
This difference in financial circumstances could be indicated in CSS
procedures by incorporating a negative contribution curve in its
financial need analysis procedures.

It is recommended that the current CSS curves of expectation be
extended downward to provide for a negative contribution, beginning at
a point where family income approximates 80 percent of the low budget
standard to a maximum negative contribution of $500 at the point where
family income approximates 50 percent of the low budget standard. The
$500 amount has been derived using Bureau of Labor Statistics pricing
data and the wardrobe and furnishings requirements indicated for students
coming from low socio-economic backgrounds.[17]

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[17] I am indebted to James Robinson of the President's Commission on Equal
Opportunity and the Chicago Inner City Financial Aid Officers
Association for insight into the budget needs of low income students.

To illustrate how a negative contribution curve would be utilized, consider a two-parent, two-child family with an effective income of $3,500 and a college budget of $2,500:

Current CSS System

College budget	$2,500
Expected parental contribution	0
Estimated financial need	$2,500

Using a Negative Contribution System

College budget	$2,500
Expected parental contribution	(290)
Estimated financial need	$2,790

The use of a negative contribution curve can indicate the different budget needs of varying income levels--a sophistication that is lacking in current CSS methodology where all income levels below the low budget standard indicate a zero parental contribution.

A negative contribution curve could be utilized by the member colleges of the CSS Assembly in two ways. Ideally, colleges should recognize the special budget needs of students from low socio-economic families, and, in particular, those students from minority groups. In these cases, financial aid awards in excess of the indicated budget should be made. This would recognize not only the explicit costs of college attendance, but also the implicit costs to these families. When a college cannot financially recognize the implicit costs, due to lack of funds or institutional policy, the negative contribution curve would serve as a ranking device for setting priorities on existing funds. In such cases, students from low-income backgrounds would have a greater indicated need for financial assistance, and would receive priority in the allocation of institutional and public sector funds.

The negative contribution curves concept is a viable one for CSS and its incorporation in need analysis procedures is recommended.

Recommendations

It is recommended that the following revisions in the current CSS procedures relative to the determination of parental ability to pay for higher education be implemented in order to provide a more responsive and equitable system in light of current conditions in the economy:

1. That the current budget standards in use by CSS (low, moderate, and higher) for families of varying sizes be updated for a 20 percent change in the cost of living index and revised in accordance with new SSA family size differentials.

2. That the expected contribution at each of the three budget standards be revised to provide for:

Low standard	$ 300
Moderate standard	$1,100
Higher standard	$2,400

3. That discretionary income above that indicated for the high budget standard be subject to a single, progressive marginal taxing schedule as follows:

Income Above the High Budget Standard	Marginal Taxing Rate
First $1,000	35%
Second 1,000	39%
Third 1,000	44%
Fourth 1,000 and each succeeding $1,000	50%

4. That a negative contribution curve be implemented in CSS procedures.