Student OASDI Beneficiaries:
Program Utilization and Educational Aspirations

by Robert I. K. Hastings *

This article describes the past, current, and projected utilization of social security student benefits by children receiving them in December 1972 Of the nearly 2 million children aged 18–21 estimated to be eligible in 1972, about one-third were actually receiving benefits at the end of the year School enrollment rates by age and race for the beneficiary and total populations were remarkably similar Nearly half the students with benefits in current-payment status had been initially awarded benefits as children 5 or more years earlier An estimated 68 percent of those in the sample were expected to have fulfilled their undergraduate plans before benefits were terminated because of the age cutoff Multivariate analysis revealed that the amount of the monthly benefit has a significant nonlinear relationship with the beneficiary's plans to continue in school The median cumulative benefit received was projected to be just over $5,000 for those intending 4 or more years of college

The role played by social insurance benefits in the lives of entitled persons is usually measured by their economic impact but can also be evaluated on the basis of their appropriateness and timing in relation to the stage in the life cycle of the intended recipients Most old-age, survivors, and disability insurance benefits under the Social Security Act are paid on a family basis, with eligibility for dependent's benefits defined in terms of both the individual's relationship to the insured worker and the dependency phase involved—childhood, child care, disability, or old age This article examines the timing of social security benefits paid to students aged 18–21 and the appropriateness of the administrative provisions governing payment that relate to educational careers

Children usually pursue their educational careers continuously to the desired level of attainment The progress of some children, however, is interrupted or delayed for various reasons, the result is differential levels of attainment by age The "goodness of fit" between payments to replace lost earnings under social insurance and the actual circumstances of beneficiary children who are completing their education is examined here

*Division of Retirement and Survivors Studies Office of Research and Statistics, Social Security Administration

Since receipt of these benefits is conditional in part on full-time school attendance, an estimate has been made of the proportion of children potentially eligible for benefits who were actually receiving them for this reason in 1972 The student's utilization of social security benefits is also examined in terms of age at first entitlement, current educational goal and ultimate intention, as well as the amount of benefit receipt throughout the educational career

The Social Security Act was amended in 1965 to extend to ages 18–21 the availability of benefits for children of insured deceased, retired, or disabled workers if the children are unmarried and enrolled full time in an acceptable school Most types and levels of school, as well as courses of study, are acceptable, except for correspondence courses and courses of less than 13 weeks in duration Benefits continue to be paid through the end of the semester or quarter in which the student attains age 22 if a degree has not been received from a 4-year college or university Thus, coverage can extend up to 5 months into the student's twenty-second year The interaction of this age limitation with actual attendance patterns is analyzed at several points

Dependents of retired or disabled workers may receive half the basic monthly amount to which the worker is entitled, and survivors of deceased workers may

receive three-fourths These benefits may be reduced, however, if the earnings of either the worker or the student exceed the exempt amount specified in the law [1] Additionally, the family maximum provision limits the amount of benefits payable on a worker's record to 150–188 percent of the basic benefit amount This provision effectively lowers the benefits payable to each person when more than two persons are currently being paid [2]

These circumstances of entitlement translate into varying family experiences as workers' children become student beneficiaries In some families in which one of the parents died, retired, or became disabled while the child was quite young, dependence on social security benefits as an economic resource is a matter of long standing A monthly benefit check has become an expected and predictable part of family income When such children extend their formal education beyond age 17, the continuing receipt of dependent child's benefits forestalls the financial adjustment that would be necessary if income were to be reduced before schooling was completed

Other children are already pursuing higher education when the family income is disrupted by the death, disability, or retirement of the working parent For such children the initiation of benefits eases an otherwise difficult situation, continuing their planned education even though resources have been sharply diminished by the loss of the parent's earnings

Characteristics of Benefit Utilization

The estimates presented here are based on data obtained in the Social Security Administration 1973 Survey of Student Beneficiaries The Survey included only those students whose benefits were in current-payment status in December 1972 It is possible, however, to estimate the total number of children aged 18–21 who would have been eligible for benefits had they remained unmarried and enrolled in school About 2 6 million children of insured deceased, disabled, or retired workers were found to be potentially eligible [3] Of this number, approximately 1 9 million persons remained eligible after those estimated to be married—and thus ineligible for benefits, even if enrolled—were eliminated

Although slightly more than 1 million students received benefits at some time during 1972, benefits were

Table 1.—Percent of total population and of persons potentially eligible for social security benefits in school full time, by age and race, 1972 [1]

Age and race	Percent	
	Total population [2]	Potentially eligible for social security benefits [3]
Total	37 2	31 3
18	52 4	41 1
19	37 6	31 7
20	31 6	26 1
21	25 5	24 2
Black, total	31 3	27 9
18	54 3	38 8
19	29 7	30 7
20	22 3	21 2
21	13 4	17 1
Other, total	38 0	32 2
18	52 1	41 9
19	38 7	32 1
20	32 8	27 2
21	27 0	25 7

[1] Data estimated social security data as of Dec 31 1972 total population data as of October 1972

[2] Excludes those potentially eligible for social security

[3] Excludes those estimated to be married and thus ineligible for benefits Numerator excludes those enrolled in vocational schools

Source Bureau of the Census, **Current Population Reports,** Series P 20 No 247, table 1 and No 260 tables 9 and 14

in current-payment status at the end of 1972 for only 634,000 students (one-third of those eligible) Of those aged 18 and eligible, nearly 45 percent (adjusted for marriage) were receiving benefits, with little difference by race [4]

Table 1 compares the estimated school enrollment rates of all children potentially eligible for social security benefits with the nationwide enrollment rates for all children aged 18–21 The declining pattern of enrollment rates by age is similar for the two groups as they move from relatively inexpensive and broadly available high schools and 2-year colleges to the more selective 4-year colleges The differences in enrollment rates for the total population and those eligible for benefits virtually disappear by age 21 Since earlier survey findings have shown student beneficiaries to be of a lower socioeconomic status than members of the general population,[5] significantly lower enrollment rates for the beneficiary group might have been expected Some indication exists, however, that the availability of benefits may foster attendance, especially among older students and blacks As table 1 shows, in 1972 the proportion of the total black population enrolled in school full time at

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[1] It is unlikely that a student could have had earnings exceeding the earnings-test levels in effect during the 1972–73 school year—$1,680 in 1972 and $2,100 in 1973—and still have attended school full time

[2] For further details on the student benefit program, see the technical note, pages 31–33, and Philip Springer, "Characteristics of Student OASDI Beneficiaries in 1973 An Overview," **Social Security Bulletin,** November 1976

[3] For details on the estimation procedure, see table I, page 32

[4] For this article, the racial variable has been coded as ' black" and "other " The students who were not reported as either black or white (1 percent of the sample) were determined to be more closely similar to the white majority They are thus combined with that group, where their marginal impact is also less significant

[5] See Philip Springer, **op cit**

Table 2 —Percentage distribution of student beneficiaries, by years since initial entitlement, basis of entitlement, and current age, December 1972

Years since initial entitlement	Total	Basis of entitlement, parent—			Current age			
		Deceased	Retired	Disabled	18	19	20	21
Total number (in thousands)	588	401	99	88	214	157	120	97
Total percent	100	100	100	100	100	100	100	100
Less than 1	9	7	17	13	10	9	10	8
1	11	8	18	18	11	12	8	13
2	10	8	15	14	11	9	11	9
3	10	9	12	10	10	10	10	10
4	10	10	8	11	10	9	10	10
5	6	7	6	7	7	7	7	5
6–7	11	12	9	10	12	10	12	11
8–9	8	9	5	8	9	9	7	6
10–11	9	10	5	5	9	10	8	7
12–14	8	10	2	4	7	8	9	7
15 or more	7	10	2		4	7	8	12
Median years	4 9	6 2	3 0	3 4	4 8	5 1	5 0	4 9

age 21 was only one-fourth as large as the proportion among those aged 18 Among the black students eligible for benefits, the proportion enrolled in school full time at age 21 was close to half the proportion at age 18

Current Duration of Entitlement

More than 80 percent of the student beneficiaries first became entitled to child's benefits when they were under age 18 The proportion ranged from nearly all of those aged 18 in the survey year to two-thirds of those aged 21

The recency of the initial award, however, had little effect on whether the benefits were still in current-payment status A child awarded benefits at age 12 because of the death, disability, or retirement of a parent insured under the program was as likely to be a student beneficiary as one initially awarded a benefit at an older age (roughly 1 in every 4 or 5) Those awarded benefits at ages 20–21 provided an exception They were more likely to be enrolled in school full time, obviously because they were already committed to post-secondary education when they came on the rolls

Children under age 18 who become entitled to benefits remain entitled until they leave school (after age 17), marry, or reach age 22 [6] The distribution of the number of years since initial entitlement reflects this continuing availability of benefits (table 2) Nearly half the students who were receiving benefits had been awarded them as children 5 or more years earlier, a fourth had been on the rolls for 10 years or longer

The continuing availability of benefits beyond age 18 is especially important to the children of deceased

workers, who accounted for two-thirds of all student beneficiaries Thirty percent of the survivor children receiving benefits had been entitled for 10 years or longer, compared with less than 10 percent of the children of the disabled and retired The fact that the children of retired workers tend to be older when they are first awarded benefits accounts for the large proportion of such persons (17 percent) who had been on the rolls for less than 1 year Although the college-age children of disabled and retired workers are less likely than the children of deceased workers to be former child beneficiaries, the initial award of benefits often comes at a point in their educational career when the availability of funds to replace lost earnings may be the key factor in a choice between school and the labor force

Turnover of Beneficiary Population

Only about 60 percent of the 1,052,000 students receiving benefits at any time during 1972 were receiving benefits at the end of the year, an indication that a large proportion of the students had their benefits terminated during the year Two-thirds of the benefit terminations resulted from the cessation of full-time school attendance (table 3) When terminations for reasons other than the age-22 cutoff are examined separately, the proportion attributable to the full-time enrollment requirement increases to 83 percent

Duration of benefits before termination cannot be determined from administrative data With the master beneficiary record for the survey cases, however, it is possible to estimate whether the terminations came from the group with benefits in current-payment status at the end of 1971 or from those whose benefits were newly awarded in 1972 (table II) A smaller proportion of the

Table 3.—Percentage distribution of student beneficiaries with benefits terminated, by reason for termination and basis of entitlement, December 1972

Reason for termination	Total	Basis of entitlement, parent—		
		Deceased	Retired	Disabled
Total number (in thousands)	418	263	77	78
Total percent	100	100	100	100
Death of—				
Beneficiary	(¹)	(¹)	(¹)	(¹)
Disabled worker beneficiary[2]	2			10
Marriage	8	9	7	8
Reached age 22	20	21	25	13
Entitled to equal or larger benefit[2]	2	1	3	4
Recovery of disabled worker beneficiary	1			3
No longer full time student	66	70	64	60
Other[2]	1	(¹)	1	2

¹Less than 0 5 percent
[2]Benefit terminated only for conversion to another type not for cessation of benefit

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[6]Children and other dependents also lose their entitlement when the worker-beneficiary recovers from a disability or has sufficient earnings to cause all benefits to be forfeited under the earnings test

new awards (one-fourth to one-half) than of those currently payable at the end of the previous year (one-half to three-fourths) were still currently payable at year's end Two distinct explanations for this turnover of new additions to the rolls are possible First, children already enrolled in school when the entitling event (death, retirement, or disability) occurred may have soon completed their intended level of schooling or dropped out, conceivably in response to a variety of pressures initiated by the event Second, short programs such as vocational courses lasting from 3 to 5 months (that are likely to be missed in an end-of-year survey such as this one) would appear as an award and a termination in the same year

Variations on Usual School Career

Benefits are available under the Social Security Act to students for the 4 years following their eighteenth birthday because of their continued dependence, not because the social security program guarantees 4 years of postsecondary education Although the receipt of benefits by eligible children under age 18 is virtually assured, those aged 18–21 must continually meet the various requirements of enrollment and dependence outlined earlier Movement into and out of beneficiary status is possible

The upper limit of age 22 for receipt of student benefits was established by using the usual 4-year postsecondary school career as a model When a child deviates from this model, the duration of student benefits becomes shorter than the time needed to obtain an undergraduate degree Students who complete high school late, have a break in entitlement as a student, or select an atypical college program are likely to exceed the age limit before their postsecondary education is completed Data from the 1973 survey make it possible to examine how the program provisions interact with the realities of school careers

Late high-school graduation. The 4-year postsecondary school assumption is inappropriate for children who finish secondary school beyond 18½ years of age because they lack sufficient eligibility to complete the customary 4-year college program The data in table 4 indicate that at least 27 percent or about 160,000 of the current beneficiaries were behind the typical high-school schedule More than 40 percent of the black beneficiaries graduated from high school at an age older than 18½, and male students of all races tended to be more likely than female students to be behind in this respect In addition, regardless of race or sex, the lower the student's high-school grade-point average the more likely it was that the student was older than 18½ at graduation More than half the students with a C average or less graduated late but less than a fifth of those averaging B or better

Table 4 —Percentage distribution of student beneficiaries, by age at completion of high school, high-school grade-point average, race, and sex, December 1972

Age at completion [1] race and sex	Total[2]	High school grade point average			
		4 00–3 25 (A–B+)	3 24–2 75 (B)	2 74–2 25 (B– –C+)	Less than 2 25 (C or less)
Total					
Total number (in thousands)	578	162	172	134	110
Total percent	100	100	100	100	100
18½ or younger	60	73	67	55	36
Older than 18½	27	15	21	32	51
Not ascertained	13	12	12	13	13
Black					
Total number (in thousands)	84	13	21	25	25
Total percent	100	100	100	100	100
18½ or younger	47	61	62	47	27
Older than 18½	41	30	23	42	62
Not ascertained	12	9	15	11	11
Other					
Total number (in thousands)	495	149	152	109	85
Total percent	100	100	100	100	100
18½ or younger	62	74	67	56	39
Older than 18½	25	13	21	30	47
Not ascertained	13	13	12	14	14
Male					
Total number (in thousands)	302	64	88	77	72
Total percent	100	100	100	100	100
18½ or younger	54	71	64	50	34
Older than 18½	33	16	24	26	54
Not ascertained	13	12	12	14	12
Female					
Total number (in thousands)	276	98	84	56	38
Total percent	100	100	100	100	100
18½ or younger	66	74	71	61	40
Older than 18½	21	14	17	26	44
Not ascertained	13	12	12	13	16

[1] As the age at school graduation was obtained only in years the months were imputed on the basis of the month of birth and the most common age at-entrance requirement for elementary school (age 6 at end of calendar year) For about 13 percent of the students it was not possible to determine the age accurately
[2] Of the 10,000 students whose grade point average was not obtained, 4,000 had discontinuity in entitlement

Sixty-five percent of those in the sample who will have graduated behind the modal schedule were still finishing high school when they were interviewed, even though high-school students made up only about 20 percent of all beneficiaries From this information, it is evident that student beneficiaries who graduate later than usual are less likely than others to continue their education beyond high school, a finding that also applies to the general population aged 18 or older [7]

[7] See Philip Springer, op cit , pages 14–15

Table 5.—Percentage distribution of student beneficiaries, by continuity of entitlement and age, December 1972[1]

Continuity of entitlement	Age				
	Total	18	19	20	21
Total number (in thousands)	588	214	157	120	97
Total percent	100	100	100	100	100
Continuous	89	98	91	80	77
Discontinuous	11	2	9	20	23
Months of discontinuity total percent	100	(²)	100	100	100
1–2	10		3	9	9
3–4	11		15	9	8
5–6	9		12	11	6
7–8	11		20	8	7
9–10	9		13	8	9
11–12	10		10	12	10
13–16	10		17	12	4
17–20	7		7	10	6
21–24	10		2	14	14
25–36	9		(³)	5	20
37 or more	3		(³)	(³)	7

[1] Includes those who failed to qualify when first eligible for benefits Limitations of program data allow determination of only the single most recent discontinuity in entitlement as students
[2] Fewer than 50 sample cases
[3] Less than 0 5 percent

Continuity of benefit receipt Eleven percent or about 64,000 of the members of the survey population experienced a discontinuity in benefit receipt after their eighteenth birthday (table 5) As the age of the student increases so, of course, does the possibility of discontinuity The proportion with breaks rose from 2 percent at age 18 to 23 percent at age 21

Black student beneficiaries were slightly more likely to have had an entitlement discontinuity by ages 20 and 21, as were students with lower high-school grade-point averages (table 6) Students enrolled in postsecondary programs other than 4-year college courses were also more likely to have experienced such a break Neither family income nor monthly benefit amount showed a consistent relationship with breaks in entitlement

The weak relationship of the income variables with continuity of benefits is surprising, given the traditionally assumed relationship between educational attainment and family income As the following tabulation

Reason for being out of school	Total	Male	Female
Total percent	100	100	100
Working or looking for work	59	66	49
Raising a family	5	2	8
Doing nothing	10	5	17
Traveling	2	2	4
Other	24	25	22

shows, the reasons students gave for being out of school for a semester or longer after their eighteenth birthday were primarily work-related—a finding that suggests they had some economic motivation to leave school

Table 6.—Number and percent of beneficiaries with discontinuity in entitlement, by age and selected characteristics, December 1972

Characteristic	Total		Current age							
			18		19		20		21	
	Number (in thousands)	Percent	Number (in thousands)	Percent	Number (in thousands)	Percent	Number (in thousands)	Percent	Number (in thousands)	Percent
Total	588	11	214	2	157	9	110	20	97	23
Sex										
Male	307	10	113	2	77	8	60	18	56	23
Female	281	11	101	2	80	11	59	21	40	22
Race										
Black	86	12	37	1	23	11	14	25	11	33
Other	502	11	177	2	134	9	106	19	85	22
High school grade-point average										
4 00–3 25	162	10	50	1	44	9	35	11	96	22
3 24–2 75	172	11	54	1	43	9	42	21	33	16
2 74–2 25	134	11	53	1	36	10	24	22	20	28
Less than 2 25	110	12	53	3	31	9	17	30	9	(¹)
Monthly benefit amount										
0–$89	192	9	84	3	50	9	33	18	24	21
90–139	201	12	63	1	60	12	40	20	39	23
140 or more	195	11	67	2	47	7	47	20	34	24
Total family income without student s benefit										
Less than $5,000	164	10	70	2	46	8	29	24	20	26
$5,000 or more	319	10	113	2	80	10	69	17	56	21
Not ascertained[2]	105	14	31	1	31	11	22	24	21	26
Type of school										
High school	126	4	96	1	24	9	6	(¹)	1	(¹)
Noncollege postsecondary	41	15	17	2	14	17	7	(¹)	4	(¹)
2-year college	103	17	35	3	40	12	22	39	6	(¹)
4-year college	317	11	66	2	80	7	85	14	86	19

[1] Fewer than 50 sample cases
[2] Includes cases where income was not fully reported or a parent questionnaire was not obtained

The "other" category consists mainly of reasons related to the health of the student Thus, the vast majority of the discontinuities represented gainful or unavoidable use of the time These gaps, whether necessary or not, decrease the potential duration and amount of benefit receipt

Educational Aspirations

Three levels of the student beneficiaries' educational aspirations can be studied by means of the 1973 survey data The degree programs in which the students were currently enrolled, their plans for enrolling for the next school year, and their ultimate educational goals When these goals are known, it is possible to estimate the age at which social security benefits will have terminated, either because of completion of an undergraduate education or because of the age cutoff, whichever occurs first

Current Enrollment

One-fifth of the student beneficiaries were attending high school in the 1972–73 school year, and nearly one-fourth of these students were in the eleventh or a lower grade Two percent were enrolled in business or secretarial schools, 5 percent were studying under technical or vocational programs, and 72 percent were in college Of the college enrollees, 15 percent were working toward an associate's degree, 4 percent toward a teaching certificate, and 75 percent toward a bachelor's degree

The age (in years and months) at completion of the current degree program can be estimated by using the student's stage in the program and the exact age How closely the student beneficiary population fits the 4-year postsecondary assumption can then be assessed It must be assumed that the student was (1) finishing a school year at the time of the interview and (2) would complete the remainder of the program in a modal time without interruption

The median age at completion of the current degree or program was 21½ years (table 7) The majority of students therefore will have finished their immediate program well before reaching the age-22 limitation Sixteen percent or 92,000 will have completed their studies 5 or more months into their twenty-second year, however, and will not have received benefits for a month or more of study Those who will have had difficulty completing their current studies within the age bounds were primarily enrolled in 4-year colleges Although the benefit regulations would have provided coverage for most of those currently seeking a bachelor's or higher degree, 24 percent were in the portion of the distribution above which benefits were unavailable This latter group consisted of more than 77,000 beneficiaries

In 1972, about 8 percent of the student-benefit terminations were caused by the marriage of the dependent Undoubtedly, these students forfeited some monthly benefit payments that otherwise would have been received The students surveyed were asked, "How likely is it that you will get married before your twenty-second birthday?" Although one-fourth responded that it was likely, the intentions to marry were inversely related to age at completion of the school program, as the following tabulation shows Only 17 percent of those who

Age at completion of current school level	Percentage distribution, by likelihood of marriage			
	Total	Likely to marry	Not very likely	Not at all likely
Total	100	24	32	44
Under 21	100	32	33	35
21	100	20	32	48
22 and over	100	17	29	54

would have graduated after age 21 and thus probably would have received benefits into their twenty-second year intended to marry earlier These benefit terminations for marriage would have reduced the proportions likely to have had their benefits terminated because of the age rule to 13 percent of the survey population and 19 percent of those then seeking a bachelor's degree More than half the members of the latter group had either graduated later than usual from high school, had a gap in entitlement as a student, or both Most of the remainder can be assumed to have received the 4-year degree after the cutoff as a result of 5-year programs (work study, for example), a shortage of credits, or unreported breaks in schooling

Immediate Intentions

Most of the students receiving social security benefits at the end of 1972 intended to pursue education of some type beyond their current year (a necessary condition for continuation of benefits) Overall, 84 percent of the beneficiaries planned on more schooling, with virtually no difference by racial group or sex (table 8) Understandably smaller proportions of students in the final year of a program intended to receive more education Still, 57 percent of the high-school seniors, 84 percent of second-year junior college students, and 75 percent of the college seniors intended to continue

Table 9 presents the results of a multiple classification analysis (MCA) of whether or not students intended more schooling, performed separately for high-school and college seniors MCA is an iterative, least-squares regression procedure using categorical predictors [8] Results are expressed as deviations of the category means

[8] For a brief summary of the MCA procedure, see the technical note, page 32

of the dependent variable for each predictor from the overall sample mean—adjusted for the interrelationships of the predictors included The means in table 9 can be interpreted as the percentage of students who intended to pursue more schooling

When adjustments are made for the interrelationships of the nine predictors used to explain post-high-school activity, the student's monthly benefit amount ranks a close second to father's education in terms of importance Though father's education, occupation, and race

Table 7.—Percentage distribution of student beneficiaries, by age at completion of current school level and by type of degree or certificate, December 1972

Age at completion (in years and months)	Current degree or certificate							
	Total	High school diploma	Vocational or technical certificate	College degree				
				Total¹	Associate s	Bachelor s or teacher s certificate	Graduate	Other
Total number (in thousands)	588	126	41	420	63	321	15	14
Total percent	100	100	100	100	100	100	100	100
Under 21	39	97	75	18	79	4	14	9
18	12	48	15	(²)	1	(²)	(²)	2
19	14	34	27	7	35	(²)	6	3
20	13	15	33	11	43	4	8	4
21	30	2	13	41	16	48	21	33
1–4	4	1	6	5	9	4	5	(²)
5–8	11	1	4	15	5	18	6	10
9–12	15	(²)	3	21	3	26	10	23
22	25	1	11	32	4	39	35	39
1–4	15	(²)	6	20	4	24	19	27
5–8	6	1	2	7	(²)	9	4	8
9–12	4	(²)	3	5	(²)	6	13	4
23 or older	6	(²)	1	9	1	9	30	19
Median age	21 5	19 0	20 2	21 9	20 2	21 9	22 3	22 3
Students intending to remain unmarried beyond age 21								
Total number	448	83	26	340	47	266	13	9
Median age	21 7	19 0	20 3	21 9	20 3	21 9	22 3	(³)

¹Includes 7,000 who reported no degree intentions or did not know intentions (4,000 of them in the group who intended to remain unmarried)
²Less than 0 5 percent
³Fewer than 50 sample cases

Table 8 —Number and percent of student beneficiaries intending school beyond current level, by sex and race, December 1972

Current school level	Total		Sex				Race			
			Male		Female		Black		Other	
	Number (in thousands)	Percent	Number (in thousands)	Percent	Number (in thousands)	Percent	Number (in thousands)	Percent	Number (in thousands)	Percent
Total¹	588	84	307	84	281	83	86	82	502	84
High school	126	66	80	70	46	58	31	72	95	64
Less than grade 12	29	95	21	97	8	(²)	9	95	20	95
Grade 12	97	57	59	60	38	51	22	62	75	55
Vocational or technical (in months)	41	49	15	49	26	49	8	(²)	33	47
Less than 18	20	25	6	(²)	14	24	4	(²)	16	24
18 or more	19	74	8	(²)	11	80	4	(²)	15	71
College (2 or 4 year)	420	92	211	92	209	92	46	92	374	92
First year	126	96	61	96	65	97	16	98	110	96
2 year	52	94	25	96	27	92	7	(²)	45	94
4 year	74	98	36	96	38	100	9	100	65	98
Second year	129	93	64	95	65	91	14	87	115	93
2 year	50	84	26	87	24	78	7	(²)	43	84
4 year	79	99	38	100	41	98	7	(²)	72	99
Third year	90	100	46	100	44	99	9	100	81	100
Fourth year or more	73	75	39	70	34	80	7	(²)	66	74

¹Includes 2 000 students for whom length of vocational or technical program was not ascertained and 2 000 for whom length of college stay was not ascer tained
²Fewer than 50 sample cases

are key factors affecting educational intentions among the general student population, the benefit amount continues to exert a strong effect even when these factors are controlled

It is certainly reasonable to assume that a high-school senior would take the dollar amount of the monthly benefit into account when deciding whether or not to pursue higher education Some caution in interpretation is called for, however Since the benefit reflects the earnings level of the worker on whose account the child is entitled, it is related to the family's socioeconomic status Even though statistical controls were made to remove the independent explanatory power of father's education and occupation, as well as current family income (each highly related to pre-entitlement income), a part of the correlation between monthly benefits and pre-entitlement income could have persisted If the father's pre-entitlement income were known and included in the analysis, the effect of the monthly benefit amount would diminish considerably It should also be

Table 9 —Multiple classification analysis of student beneficiaries of whether or not intending more school next year, by current school level and selected characteristics, December 1972 [1]

	Current school level											
	High school grade 12						College fourth year					
Grand mean	57						75					
Standard error	2 3						2 3					
Multiple R^2	0 133						0 126					
Number of cases (weighted)	90 207						72 977					
Number of sample cases	463						354					
Characteristic	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank
		Unadjusted	Adjusted					Unadjusted	Adjusted			
Race												
Black	23	5	17	0 003	0 035	3	10	5	9	0 002	0 005	9
Other	77	-2	-5				90	-1	-1			
Sex												
Male	61	3	3	006	005	9	53	-4	1	011	001	11
Female	39	-5	-4				47	5	-1			
Monthly benefit amount												
0-$59	24	12	-13				9	-6	2			
60-89	20	-3	-6				12	4	3			
90-114	14	-7	-3	040	052	2	23	-4	-6	020	036	4
115-139	14	16	21				20	-7	-10			
140-164	18	5	9				14	2	-1			
165 or more	10	12	4				22	10	13			
Total family money income [2]												
Less than $3 000	22	-4	-1				8	2	-2			
3 000-4 999	18	-3	-2				10	4	1			
5 000-7 999	20	7	8	010	008	8	17	8	9	019	020	6
8,000-12,999	16	-3	-5				22	-10	-9			
13,000 or more	10	10	1				21	0	-2			
Not fully reported	14	-4	-1				22	1	4			
High-school grade-point average												
4 00-3 25	11	8	4				41	5	1			
3 24-2 75	19	7	10				38	-1	2			
2 74-2 25	28	6	4	029	023	5	17	-7	-5	015	006	8
Less than 2 25	40	-10	-9				3	-4	0			
	2	-4	2				1	-44	-28			
Real father's education (in years)												
0-11	56	-7	-7				27	-1	-6			
12	16	10	5				25	0	-2			
College, 1-3	7	15	12	068	053	1	15	0	-4	0	027	5
College 4 or more	6	41	39				19	0	2			
Not ascertained	14	-7	-1				14	2	16			
Real father's occupation												
Professional managers officials, and proprietors	13	17	6				34	0	4			
Farm	7	-14	-4				4	-7	-8			
Clerical and sales	7	9	7				10	-3	-2			
Craftsmen, foremen and operatives	38	1	2	031	009	7	22	3	5	005	047	3
Other	15	-9	-6				9	5	8			
Current work reported	8	-6	-7				7	0	5			
Not ascertained	12	-5	-4				14	-3	22			
Basis of entitlement Parent—												
Deceased	66	1	-4				71	1	-1			
Retired	15	-3	3	001	013	6	19	-1	-4	003	002	10
Disabled	19	-2	10				10	-6	-2			

Table 9 —Multiple classification analysis of student beneficiaries of whether or not intending more school next year, by current school level and selected characteristics, December 1972 [1]—**Continued**

	Current school level											
	High school grade 12						College fourth year					
Grand mean	57						75					
Standard error	2 3						2 3					
Multiple R^2	0 133						0 126					
Number of cases (weighted)	90,207						72 977					
Number of sample cases	463						354					
Characteristic	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta Rank
		Unadjusted	Adjusted					Unadjusted	Adjusted			
Age at high school graduation												
18½ or younger	5	−34	−34									
Older than 18½	82	1	1	028	027	4						
Not ascertained	13	7	7									
Usually work during school year												
Yes							46	7	7			
No							54	−6	−6	020	020	7
College grade point average												
4 00–3 25							24	16	15			
3 24–2 75							36	1	−1			
2 74–2 25							28	−5	−3	081	054	2
Less than 2 25							10	−29	−20			
Not ascertained							2	−15	−21			
College major												
Business							12	−10	−9			
Education							21	10	10			
Science							14	3	−1	092	086	1
Humanity							17	10	9			
Social science							20	9	8			
Other							16	−25	−25			

[1]The means are interpreted as the percent intending more school See technical note, page 31, for discussion of multiple classification analysis

[2]Excludes student s benefits

noted that the effects of the benefit amount are not completely linear—an indication of either a saturation effect of benefit amounts at higher levels or the confounding relationship of an unmeasured variable

Father's education was the single best predictor of a high-school senior's immediate intentions (even though in more than half the cases the father was deceased) A high-school senior whose father was college-educated was much more likely (by 40 percentage points) to intend to have more schooling than was a child whose father had a grade-school education or less The adjusted deviations for race indicate that being black increased the continuation rate more than 20 percentage points in relation to the predominant white group

Even among college seniors, the monthly benefit exerted a strong effect toward continuation of schooling Its importance is surprising in light of the fact that college seniors cannot expect to receive benefits for much longer because they are nearing the age-22 limit on eligibility Though it is unlikely, given the generally low income levels, the past availability of benefits may have allowed some students to set aside resources for future use A more plausible explanation is that the monthly benefit is acting in part for some correlated variable not included in the model analyzed

The major field of study and college grade-point

average were of principal importance in determining the intentions of college seniors Clearly, certain areas of concentration—namely education, the humanities, and other social sciences—are more likely to lead to graduate study than business and the fields incorporated in the "other" group, such as engineering and home economics The strong positive effect of grade-point average underscores the more meritocratic process operating for college seniors than for seniors in high school A set of family background factors—including the student's race and sex, basis of entitlement, and father's education and occupation—alone accounts for 67 percent of the variance explained by the total model for high-school seniors On the other hand, this set of factors accounts for less than 15 percent of the variance for those in their final year of college [9] Socioeconomic background may have played a large role in the decision to attend college in the first place, but postcollege behavior seems to be a function of the interests and ability of the student

[9]The explained variance (R^2) of background alone is 089 for the high-school group and 0 19 for the college group, compared with explained variances of the total models for these groups of 133 and 126 respectively The former figures were obtained from the latter by separate regression

Table 10—Percentage distribution of student beneficiaries, by highest intended degree or certificate, basis for entitlement, and sex, December 1972

Basis of entitlement and sex	Number (in thousands)	Percentage distribution, by highest intended degree or certificate									
		Total	High school diploma	Vocational or technical certificate	College degree						Other
					Associate's	Bachelor s or teacher s certificate	Master s	Doctor s			
								Law	Medical dental	Philosophy and other	
Total	574	100	9	10	6	27	29	4	3	9	3
Male	298	100	10	9	5	27	24	6	4	12	3
Female	276	100	8	10	7	27	35	1	2	6	4
Parent—											
Deceased	391	100	9	10	6	27	29	4	3	9	3
Male	204	100	9	9	4	27	23	8	5	12	3
Female	187	100	8	10	8	27	36	1	2	5	4
Retired	96	100	8	8	6	29	31	2	3	10	3
Male	48	100	10	8	6	29	25	4	4	13	2
Female	48	100	6	8	7	29	36	1	2	7	4
Disabled	86	100	12	12	5	24	28	2	2	11	4
Male	45	100	15	10	4	24	26	3	4	12	3
Female	41	100	9	15	6	24	30	1	1	10	4

¹Excludes those for whom degree intended was not known and those for whom data were not ascertained (2 5 percent of all students)

Ultimate Intentions

The students were also asked, "What is the highest academic, technical, or professional degree that you ultimately intend to obtain?" Overall, 45 percent of those surveyed intended to continue their schooling beyond the bachelor's degree level, with no variation by basis of entitlement (table 10) It is apparent that female students were much more likely to plan to stop at the master's degree level than were male students Blacks generally intended to pursue less education than did those classified under "other races," as the following tabulation indicates

Highest intended certificate or degree	Black	Other
Total percent	100	100
High school diploma	15	8
Vocational technical certificate	15	9
Associate s degree	5	6
Bachelor s degree or teacher s certificate	21	28
Master s degree	28	29
Doctorate of philosophy, divinity or law	13	17
Other	3	3

Because the intentions of the students were related to a multitude of interacting factors, MCA was again employed in an attempt to sort out the effects of the various predictors (table 11) The dependent variable in this instance was the amount of schooling planned, coded in years Again, two subgroups of the beneficiary population were analyzed all current high-school and noncollege postsecondary students and all students in college

On the average, members of the noncollege group intended to obtain just under 14 years of schooling—an indication of limited post-high-school activity for many

Father's educational attainment was the strongest single predictor of student aspirations, exhibiting a strong positive relationship When adjustments for the inter-relationships of the predictors were made, however, the father's education, student's high-school grade-point average, and current family income were found to be of nearly equal importance

Students with less than a B average can be expected to seek half a year less education than do all beneficiary students, on the average, and almost a full year less than those with a grade-point average higher than B Although family resources were shown to have little effect on a student's shortrun plans, the strong direct effect of current family income seemed to indicate that financial limitations may have induced students to scale down their ultimate aspirations Being a female or nonblack student was associated with a net difference of nearly half a year less schooling Finally, in contrast to the strong effect of the monthly benefit amount on immediate intentions, this factor was found to be relatively unimportant in explaining the variation in ultimate intentions

When the group currently enrolled in college is studied, the dominant effect of major field of study once again is evident The more than half-year deviations below the grand mean for those majoring in business and "other" majors indicates the vocational orientation of those fields, by contrast, the science and social science majors require additional specialized schooling The sex of the student accounts for a difference of three-fourths of a year in the expected amount of education—a reflection of the plans of most female students to stop at the master's degree level Both past high-school and current college grade-point averages exert strong positive effects on intentions These factors

complement the limited importance of family-background characteristics in explaining ultimate intentions (with only 19 percent of the total variance explained) in relation to more objective factors Again, once the initial decision to go to college was made, further aspirations were associated less with background than with academic performance and field of study

Age at Completion of Undergraduate Program

When current age, stage in school, and the type of degree ultimately intended are known, it is possible to estimate the age at which the student beneficiary would have completed the highest level of schooling planned

Table 11.—Multiple classification analysis of student beneficiaries of the intended years of school, by current school level and selected characteristics, December 1972 [1]

Characteristic	High school and noncollege postsecondary						College					
Grand mean	13 9						16 9					
Standard error	0 07						0 03					
Multiple R^2	0 083						0 198					
Number of cases (weighted)	167,411						420 325					
Number of sample cases	853						2 076					
	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank
		Unadjusted	Adjusted					Unadjusted	Adjusted			
Race												
Black	23	0 03	0 41	0	0 012	4	11	−0 02	22	0	003	10
Other	77	− 01	− 12				89	0	− 03			
Sex												
Male	57	16	21	009	014	5	50	24	38	028	069	2
Female	43	− 22	− 27				50	− 25	− 39			
Monthly benefit amount												
0−$59	22	− 36	− 24				12	06	19			
60−89	19	12	10				17	− 16	− 07			
90−114	16	− 11	− 09	012	006	7	19	03	02	003	004	9
115−139	15	87	05				17	08	07			
140−164	16	17	20				15	− 09	− 14			
165 or more	12	30	10				20	07	− 03			
Total family money income [2]												
Less than $3,000	22	− 34	− 34				11	− 04	05			
3,000−4 999	21	− 36	− 33				11	− 11	− 01			
5,000−7 999	18	02	05	029	025	2	17	− 06	− 05	002	002	11
8 000−12,999	15	35	39				21	06	04			
13 000 or more	9	64	50				21	06	07			
Not fully reported	14	23	21				19	01	− 10			
High school grade point average												
4 00−3 25	11	41	43				34	31	24			
3 24−2 75	21	19	25				33	02	00			
2 74−2 25	27	27	22	027	028	1	21	− 23	− 14	038	022	3
Less than 2 25	37	− 40	− 42				11	− 56	− 46			
Not ascertained	4	− 30	− 25				1	− 08	04			
Real father s education (in years)												
0−11	55	− 31	− 24				31	− 21	− 13			
12	16	30	13				25	03	02			
College, 1−3	8	31	21	043	023	3	16	08	00	010	004	8
College, 4 or more	6	01	84				17	18	11			
Not ascertained	15	14	28				12	12	14			
Real father s occupation												
Professional managers, officials and proprietors	13	71	34				29	18	09			
Farm	6	− 34	− 06				4	− 47	− 42			
Clerical and sales	7	14	0				11	05	− 02			
Craftsmen, foremen, and operatives	38	− 06	09	023	008	6	27	− 07	02	013	007	6
Other	16	− 28	− 14				8	− 19	− 02			
Current work reported	8	− 24	− 30				8	− 19	− 23			
Not ascertained	12	02	− 24				12	12	06			
Basis of entitlement Parent—												
Deceased	67	06	− 06				68	01	− 01			
Retired	15	− 01	21	002	002	8	18	− 04	02	0	0	12
Disabled	18	− 19	− 03				14	01	01			
Age at high school graduation												
18½ or younger	21	− 11	− 08				75	05	04			
Older than 18½	67	− 01	− 01	002	002	9	13	04	03	008	005	7
Not ascertained	12	23	22				12	− 36	− 29			

Table 11.—Multiple classification analysis of student beneficiaries of the intended years of school, by current school level and selected characteristics, December 1972 [1]—**Continued**

	Current school level											
	High school and noncollege postsecondary						College					
Grand mean	13 9						16 9					
Standard error	0 07						0 03					
Multiple R^2	0 083						0 198					
Number of cases (weighted)	167,411						420 325					
Number of sample cases	853						2,076					

Characteristic	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank	Percent of cases (weighted)	Deviation from grand mean		Eta²	Beta²	Beta rank
		Unadjusted	Adjusted					Unadjusted	Adjusted			
College grade point average												
4 00–3 25							22	33	19			
3 24–2 75							31	16	10			
2 74–2 25							26	– 09	– 03	038	015	4
Less than 2 25							19	– 47	– 28			
Not ascertained							2	– 43	– 59			
College major												
Business							15	– 60	– 64			
Education							19	– 10	12			
Science							17	47	44	085	083	1
Humanity							15	21	14			
Social science							16	52	45			
Other							18	– 46	– 51			
Practical orientation [3]												
Practical							75	– 12	– 07	021	008	5
Idealistic							25	37	22			

[1] Years assigned for degree intended no degree 10 high school diploma 12, vocational certificate, etc , 13, associate s degree 14 bachelor s degree or teaching certificate 16 master s degree 17, doctorate of divinity, law, philosophy, and other, 19 M D , D D S or D V M 20 other, 16

[2] Excludes student s benefits
[3] Attitudinal question asking whether college was viewed as mainly a practical matter ' or something more intangible "

or qualified for an undergraduate degree, whichever occurred first The estimate assumes that the student was completing a school year when interviewed and would finish the remainder of the program in a modal time without interruptions Since benefits are currently available into the twenty-second year for entitled children who have not yet obtained a bachelor's degree, this projected age yields their probable date of benefit termination

Table 12 presents the estimated age distribution at the end of the undergraduate program (or sooner, if so stated by the student) of the total group for the three principal levels of aspiration Fifty-two percent of the students would have completed their intended schooling before reaching their twenty-second birthday, and 16 percent were likely to have finished during the extension into their twenty-second year Conversely, 32 percent or more than 188,000 of those sampled would not have completed their undergraduate training before their benefits were terminated

Only 4 percent of those who intended to complete less than 4 years of college would not have finished school before the payments ended Of those whose ultimate intention was to obtain a bachelor's or higher degree, however, 41 percent would have finished after their benefits were terminated for age (see chart) Twenty percent would have needed to take advantage of the extension into their twenty-second year in order to complete the course of study Of those intending to

pursue graduate studies, some would have been able to begin this schooling before reaching their twenty-second birthday Seven percent of the members of this group would probably have received benefits while attending graduate school, even if they delayed entry for a semester An additional 12 percent possibly would have done so if they enrolled in graduate school directly after graduating from college [10]

Of those students expected to finish their undergraduate education after the termination of benefits, 41 percent were (or will have been) older than 18½ years at the time of high-school graduation, 27 percent were involved in work-study programs, and 18 percent had a break in their schooling Seventy-five percent of the students involved were in at least one of those three situations The remaining 25 percent can be assumed to have had unreported interruptions in their schooling, progressed at slower than the usual pace in college, or pursued other forms of postsecondary study before attending college

Implications

The estimated age at which the student's entitlement will end can be used to approximate the ultimate duration and amount of benefits Table 13 shows the duration of benefits, beginning with initial entitlement, whether before or after age 18 Half the students will

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[10] In December 1972, 3 percent of the student beneficiaries reported that they were in a graduate program

Table 12.—Percentage distribution of student beneficiaries, by age at completion of undergraduate program and by highest intended school level (projected)

Age at completion (in years and months)	Highest intended school level			
	Total	Less than 4 years of college	4 years of college[1]	Graduate school
Total number (in thousands)	588	155	172	261
Total percent	100	100	100	100
18	4	16	(2)	(2)
19	7	27	(2)	(2)
20	11	35	1	4
21	30	14	31	39
1-4	4	7	2	3
5-8	9	3	11	12
9-12	17	4	18	24
22	35	6	46	43
1-4	16	3	20	21
5-8	12	2	18	14
9-12	7	1	9	8
23 or older	13	1	22	14
Median age	21 9	20 2	22 3	22 1
Students intending to remain unmarried beyond age 21				
Total number	488	96	131	221
Median age	22 0	20 2	22 3	22 1

[1] Includes those seeking miscellaneous degrees whose age at completion of program parallels the 4-year group
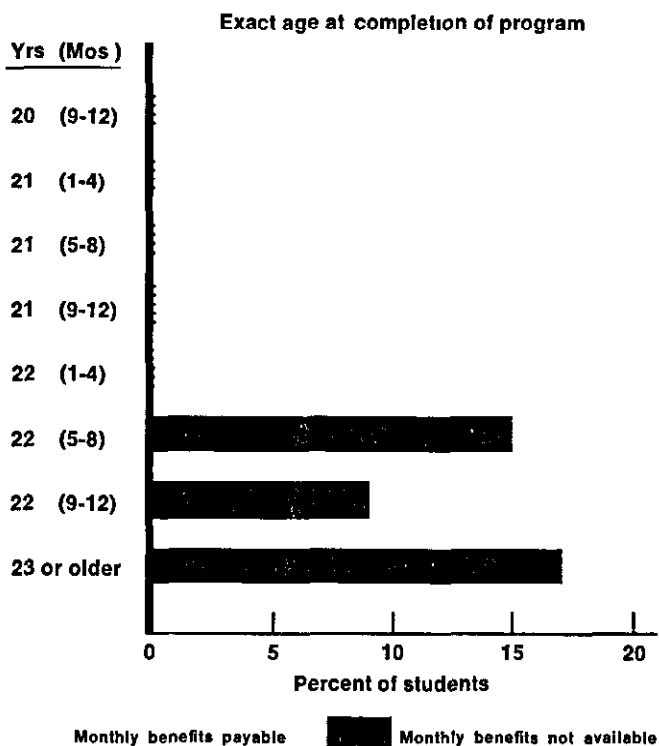[2] Less than 0 5 percent

Table 13 —Percentage distribution of student beneficiaries, by years from initial entitlement to projected end of benefit receipt and by race

Years from initial entitlement to end of receipt and race	Basis of entitlement parent—			
	Total	Deceased	Retired	Disabled
Total number (in thousands)	588	401	99	88
Total percent	100	100	100	100
Less than 1	1	(1)	3	2
1	4	4	6	6
2	7	4	13	10
3	8	6	14	13
4	11	10	14	13
5	9	8	13	10
6	9	8	10	10
7	8	8	6	8
8	6	6	4	5
9	6	6	5	4
10–11	9	10	6	8
12–13	8	9	4	8
14–15	6	7	2	3
16 or more	9	13	1	(1)
Median years	7 1	8 3	5 2	5 6
Race				
Black	7 4	8 3	5 9	5 8
Other	7 1	8 3	5 0	5 6

[1] Less than 0 5 percent

Student beneficiaries planning 4 or more years of college, by benefit availability and age at program completion

Exact age at completion of program

Yrs (Mos)

20 (9-12)
21 (1-4)
21 (5-8)
21 (9-12)
22 (1-4)
22 (5-8)
22 (9-12)
23 or older

| 0 | 5 | 10 | 15 | 20 |

Percent of students

Monthly benefits payable   Monthly benefits not available

have been entitled for more than 7 years, with the median for children of retired and disabled workers about 3 years fewer than that for children of deceased workers Little difference in duration by race is evident

As table 14 shows, median length of entitlement to student benefits is projected to be 46 months With 75 percent of the students aiming to complete 4 or more years of college and more than 80 percent having first received student benefits on their eighteenth birthday (as former child beneficiaries), what at first may seem high becomes reasonable Duration of entitlement is, of course, related to degree intentions The medians range from 16 months for those planning to stop at the end of high school to 48 months for those pursuing at least a bachelor's degree When those who intended to marry before reaching age 22 are excluded, the medians increase slightly, indicating the slightly lower educational aspirations of the members of the excluded group

The student's current monthly benefit, adjusted for benefit increases, may be used to estimate the total benefits to a student Compared with the distribution of benefit-receipt duration, that for benefit amount is much less skewed (table 14) Many students received small benefits, often as a result of the application of the family-maximum rule [11] The distribution of the cumulative benefit amounts ranged evenly from less than $1,000 to more than $8,000, the overall median was $4,392

Differences in the duration of intended schooling are

[11] Nearly 40 percent of all students had their benefits reduced because of the maximum family benefit provision The proportion was 50 percent for those in high school

Table 14 —Percentage distribution of student beneficiaries, by duration of benefit receipt, amount of benefits, and current and intended school level (projected)

Benefit receipt and amount	Total	School level						
		Current				Highest intended		
		High school	Vocational or technical	College		High school	Some post-secondary	4 or more years of college
				2 year	4-year			
Duration of benefit receipt (in months)								
Total number (in thousands)	588	126	41	103	317	52	89	447
Total percent	100	100	100	100	100	100	100	100
1–12	5	15	12	1	1	32	7	2
13–18	4	10	11	4	2	22	7	2
19–24	5	8	13	8	3	17	15	2
25–30	8	14	13	8	5	12	26	4
31–36	6	10	9	6	4	11	17	3
37–42	7	6	8	7	6	3	12	6
43–48	29	17	7	24	38	1	8	36
49 or more	36	20	27	42	41	2	8	45
Mean months	41	32	32	42	45	19	30	46
Median months	46	32	31	46	47	16	30	48
Benefit amount								
Total percent	100	100	100	100	100	100	100	100
0–$999	7	20	12	4	3	36	10	4
1 000–1 999	13	21	21	12	7	35	23	7
2 000–2,999	12	14	15	14	10	16	20	10
3 000–3 999	13	10	10	12	15	7	16	13
4 000–4 999	14	11	11	11	16	4	14	14
5,000–5,999	11	6	14	13	12	1	9	13
6,000–6 999	11	5	4	11	13	(¹)	5	13
7 000–7 999	9	4	6	7	13	1	2	12
8 000 or more	11	8	7	15	11	(¹)	1	14
Mean amount	$4,556	$3,347	$3,710	$4,766	$5,079	$1,645	$3,165	$5,172
Median amount	4,392	2,607	3,166	4,641	4,953	1,338	2,911	5,113
Students intending to remain unmarried beyond age 21								
Mean months	42	34	33	43	45	20	31	46
Median months	46	36	34	47	47	18	31	48
Mean amount	$4,738	$3,658	$3,858	$4,918	$5,113	$1,685	$3,340	$5,199
Median amount	4,595	3,030	3,463	4,912	4,993	1,334	3,147	5,161

¹Less than 0 5 percent

evident in the projected dollar amounts Students seeking only a high-school diploma had a median of $1,338, the medians were $5,113 for those intending to complete 4 years or more of college and $2,911 for members of the group intending to complete some postsecondary education (table 15)

Despite the lack of difference in duration of entitlement by race, fewer benefit dollars are projected for black students than for others This deficiency occurred not only because the earnings levels of black workers were lower, but also because their larger mean family size resulted in larger per-person reductions under the family-maximum rule The difference shows up most markedly when it is projected for a 4-year college career Median cumulative monthly benefits for members of the predominantly white group were about $5,350, compared with nearly $4,000 for blacks Although the progressive nature of the benefit structure certainly does not discriminate by race, the fact that benefits are earnings-based assures that the less-advantaged student's background will be reflected in the level of benefits

Recognition of the dependence of student beneficiaries resulted in payments totaling $816 million from the social security trust funds in fiscal year 1973 A breakdown of this annual expenditure provides a concluding perspective with which to view the above projections over the careers of student beneficiaries

Of the $66 million expended in January 1973, 19 percent went to students still attending high school, 7 percent to those in vocational and technical institutions, 18 percent to those in 2-year colleges, and 56 percent to those in 4-year colleges Overall, 78 percent of the total amount of student benefits was paid to children of deceased workers

Summary

Although the enrollment rates calculated indicate that a large number of children eligible for student benefits

Table 15.—Median duration of benefit receipt and amount of benefits for student beneficiaries, by basis of entitlement, sex, race, and intended school level (projected)

Basis of entitlement race, and sex	Intended school level							
	Duration of benefit receipt (in months)				Benefit amount			
	Total	High school or less	Some post secondary	4 or more years of college	Total	High school or less	Some post secondary	4 or more years of college
Total	46	17	30	48	$4,392	$1 338	$2 911	$5 113
Parent—								
Deceased	46	18	30	48	5 276	1,613	3,461	6,220
Retired	44	16	28	46	3 238	854	2 087	3,751
Disabled	44	16	29	48	2,694	653	1,797	3 345
Sex								
Male	46	18	32	48	4 415	1,395	3,411	5 099
Female	45	15	28	48	4 359	1,258	2,567	5,130
Race								
Black	45	20	30	48	3,045	1,148	2 375	3 975
Other	46	16	29	48	4,624	1,404	3,055	5 355

do not attend school and thus fail to take advantage of this program, the enrollment rates for eligible children nevertheless do parallel those for all children aged 18–21 The similarity of these rates suggests that the benefits perform the desired function of normalizing, at least partly, the student's ability to pursue educational goals

Considerable turnover occurs during a year within the group of students receiving benefits A large proportion of new awards in a year remain payable for only a short period, but the majority of those payable at the end of one year remain in that status throughout the following year This behavior is consistent with the observed longevity and continuity of entitlement to benefits Nearly half of the beneficiaries sampled at the end of the year had been entitled to benefits for more than 5 years, and one-fourth for more than 10 years Nine out of 10 students had received benefits continuously since their initial award Most of those with breaks in entitlement cited either work or health-related reasons for the discontinuity

Eighty-four percent of the student beneficiaries surveyed intended to continue their education beyond the interview year Nearly all those enrolled during the nonterminal years of a program planned to continue, more than half the high-school seniors and three-fourths of the college seniors planned more schooling Multiple regression analysis of the students' intention to continue their education revealed that the amount of the benefit received was one of the most important predictors, although it was necessary to consider alternative interpretations of this finding The future educational plans of college seniors were largely a function of their academic performance and field of study

Seven out of 10 beneficiaries in the sample intended to obtain at least a bachelor's degree The amount of education ultimately intended appears to be a function of the same sort of factors as those that operate for the general student population

Estimates of age at completion of the intended under-graduate education reveal that nearly one-third of the beneficiaries surveyed would have their benefits terminated by the age limitation before they completed their anticipated education Most of these students were older than age 18½ when they graduated from high school, had discontinuities in their schooling, or were in work-study programs Sixteen percent would need to take advantage of the one-semester extension into their twenty-second year to complete the work for their degree Conversely, about 1 in every 10 of those who planned to attend graduate school could have finished their undergraduate program early enough to have received some benefits as graduate students Seventeen percent of those graduating after age 21 intended to marry before that time and therefore could expect to forgo some of their potential benefits

The cohort of students examined had a projected median length of benefit utilization of 46 months, reflecting the consensus for a college education Cumulative benefit amounts were estimated to range from less than $1,000 to more than $8,000, with half of those who planned on 4 or more years of college expected to receive more than $5,000 Although no difference in projected duration was found between racial groups, the lower earnings levels of blacks are clearly mirrored in lower benefit amounts

Technical Note

Estimates for the 1973 Survey of Student Beneficiaries are based on data from separate interviews of students and parents conducted by the Opinion Research Corporation, Princeton, N J , matched with data from the benefit record system of the Social Security Administration [12] The sample represents students in the conterminous United States with benefits in current-payment status in December 1972 Interviews were con-

[12]For a more complete discussion of technical matters pertaining to this survey, see Philip Springer, op cit , pages 23–32

Table I.—Number of children eligible for and receiving student benefits, by race and age, December 1972 [1]

Race and age	Number			Percent		Total number eligible, adjusted for marriage	Percent of total eligible and unmarried with benefits in current payment status
	Children eligible total	New eligibles	Former child beneficiaries	Of total eligible with benefits in current-payment status	Unmarried [2]		
Total	2 594 251	799 464	1 794 787	24 5	72 6	1 882 228	33 7
18	581 352	83,685	497,667	39 9	89 3	519,044	44 7
19	626 203	165 552	460 651	27 5	79 3	496,481	34 7
20	664,353	234 416	429 937	19 3	69 3	460,563	27 8
21	722,343	315 811	406 532	14 5	56 1	406 140	25 2
Black	428 700	116 893	311 807	22 7	74 1	317 869	30 6
18	103 304	13 125	90 179	38 7	89 2	92,147	43 4
19	103 685	23,163	80 522	27 1	79 2	82 637	34 1
20	106 737	33 562	73 175	16 2	70 5	75 250	23 0
21	114 974	47 043	67 931	10 4	59 0	67 835	17 7
Other	2 165 551	682 571	1 482 980	24 8	72 2	1,564,348	34 3
18	478,048	70 560	407 488	40 2	89 3	426 897	45 0
19	552,518	142,389	380,129	27 6	79 2	413,844	34 8
20	557 616	200 854	356,762	19 9	69 1	385,313	28 8
21	607 369	268 768	338 601	14 9	55 7	338 305	26 7

[1] Assumes no mortality or multiple awards per person
[2] Data from Bureau of the Census **Current Population Reports**, Series P 20 No 242 November 1972 and **1970 Census of Population**, ' Marital Status ' Final Report (PC(2)-4C

ducted during the last 4 months of the 1972–73 school year and refer to that school year, family income data are for calendar year 1972

Complete interviews were obtained from 86 percent of the 3,426 sampled students, and matching student/family interviews were conducted in 81 percent of the cases The data, with appropriate adjustments for non-response, provide estimates for the 587,989 of the 634,481 student beneficiaries listed on the rolls in December 1972 who had been in school during the 1972–73 school year

Monthly program statistics reveal a great deal of fluctuation in the number of student beneficiaries related to seasonal variations in school enrollments Sampling from the December rolls does not reflect such changes in composition

Estimating Number Potentially Eligible for Benefits

To receive student benefits under the social security program a child of a deceased, disabled, or retired worker must be aged 18–21, enrolled in school full-time, and unmarried Administrative data are not maintained on those children potentially eligible for but not receiving benefits This group consists of persons initially awarded benefits as children before reaching age 18 who age into the student benefit years, as well as an unknown number of children whose working parent dies, retires, or becomes disabled when the child is already aged 18–21 The former group can be projected by simply increasing the ages of children in earlier years by the appropriate amount of elapsed time The latter group must be estimated more indirectly The first step was to calculate the number of persons awarded benefits

as children at ages 13–17 as a proportion of all children aged 13–17, by age and race These proportions were then extrapolated to ages 18–21 The results were multiplied by the respective numbers in the total population for 1972 and each of the 3 preceding years to yield the potential awards by age and race in those years Table I enumerates the steps of the estimation A further adjustment was made to exclude the proportion of children likely to be married and thus ineligible even if enrolled in school

Estimating Turnover of Beneficiary Population

Use of the master beneficiary record for sampled persons in December 1972 makes it possible to determine whether the large number of student benefit terminations in 1972 involved those with benefits in current-payment status in December 1971 (when they were 1 year younger) or those newly awarded benefits during 1972 (table II)

The proportion of students with benefits in current-payment status in December 1972 who received their awards during that year is known from the sample records This figure was used to obtain the proportion of persons whose benefits were awarded in 1972 and were still in current-payment status at the end of the year, and finally the proportion of those with benefits in current-payment status in both December 1971 and December 1972

Multiple Classification Analysis

When the number of interrelated explanatory variables discussed in this article became too cumbersome for customary tabular analysis, multiple classification

Table II.—Annual turnover in student beneficiary population, by basis of entitlement and age, 1972

Basis of entitle-ment and age	Total number of benefits in current payment status		Total awarded during 1972[3]	Benefits in current payment status, December 1972				
				Number		Percent awarded during 1972[4]	As percent of total awards[5]	As percent of total at beginning of 1972[6]
	Beginning of 1972[1]	During 1972[2]		Total	Awarded during 1972			
Total	1 025 413	1 051 940	468 566	634 481	70 008	0 110	(7)	55 0
18*	442 039	281 763	281,763	232 005	9 280	040	(7)	50 4
19	210 424	292 820	82,396	172 139	26 509	154	32 2	69 2
20	162 263	209 549	47 286	128,072	19 595	153	41 4	66 9
21*	119 294	176 415	57,121	102 265	14 624	143	25 6	73 5
22	91 393	91,393						0
Parent—								
Deceased	685 697	685 020	284 623	426 796	38,860	091	(7)	56 6
18	285,300	182 784	182 784	154 676	3,558	023	(7)	53 0
19	142,805	189 762	46 957	115,863	15,178	131	32 3	70 5
10	112,296	137 514	25 218	87 084	11,408	131	45 2	67 4
21	82 881	112,545	29 664	69 173	8,716	126	29 4	72 9
22	62,415	62,415						0
Retired	162 552	184,348	86,830	105 425	20 061	190	(7)	52 5
18	63 034	42 480	42,480	33,945	2 817	083	(7)	49 4
19	31 396	48 079	16,683	28 091	6 882	245	41 3	67 6
20	26,520	38 118	11 598	22,979	6,770	241	58 4	61 1
21	21,306	37 375	16 069	20 410	3,592	176	22 4	78 9
22	18 296	18,296						0
Disabled	179,164	182 572	97 113	102,260	12 538	123	(7)	50 1
18	93,705	56 499	56 499	43,384	2 863	066	(7)	43 2
19	36,223	54 979	18 756	28 185	4,510	160	24 0	65 3
20	23 447	33 917	10 470	18 009	2 755	153	26 3	65 1
21	15,107	26 495	11 388	12 682	2,410	190	21 2	68 0
22	10 682	10,682						0

[1] Represents benefits in current payment status in December 1971 for benefici aries whose age is 1 year younger than that shown
[2] Column 1 plus column 3
[3] Includes conversions at age 18 from child to student status
[4] Column 5 divided by column 4
[5] Column 5 divided by column 3

[4] Column 4 minus column 5 divided by column 1
[7] Not computed base includes conversions at age 18
[8] Includes only those awarded as student s benefits excludes conversions
[9] Includes those aged 21 during year who became age 22 before end of semester in which currently enrolled

analysis (MCA) was used [13] Developed at the University of Michigan's Survey Research Center, MCA is an iterative, least-squares regression procedure using categorical predictors It differs from dummy-variable regression in that all categories of a predictor variable are represented Results are expressed as deviations of the category means from the grand mean of the dependent variable The deviation, when adjusted for interrelationships among the predictors in a model, indicates the signed difference from the overall mean for persons who possess the given characteristic By summing the adjusted deviations for a set of characteristics of interest, one can obtain an estimate of the difference from the grand mean for persons falling in that set This technique assumes that the "true" model is well represented by an additive model—that is, there is no interaction

[13] See Frank M Andrews et al , **Multiple Classification Analysis,** Second Edition, University of Michigan, 1973

MCA also provides summary measures of the predictive power of the set of subclasses that make up a variable The first—Eta^2—represents the gross effect of a single variable acting alone (compare the square of the correlation coefficient) The second—Beta^2—stands for the net effect of the variable in a multivariate context By rank-ordering the beta-squared terms the relative importance of the variables is highlighted Finally, the proportion of the total variance in the dependent variable accounted for by the model is given (R^2)

The dependent variable must be interval-level or a dichotomy When a dichotomy is used the variable is coded zero and one Thus, the mean can be interpreted as the proportion of the cases in that group coded one One problem with using dichotomous dependent variables is the possibility that the predicted values exceed one in certain hypothetical situations Low levels of explained variance (R^2) are the rule because of the polarity of the true value