Munday, Leo A.


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American College Testing Program

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IMPACT OF EDUCATIONAL DEVELOPMENT, FAMILY INCOME, COLLEGE COSTS, AND FINANCIAL AID IN STUDENT CHOICE AND ENROLLMENT IN COLLEGE.
IMPACT OF EDUCATIONAL DEVELOPMENT, FAMILY INCOME, COLLEGE COSTS, AND FINANCIAL AID IN STUDENT CHOICE AND ENROLLMENT IN COLLEGE

ABSTRACT

Relationships among student and college characteristics were studied in conjunction with colleges students chose and attended. Two data sets, one of students who were college-bound in 1971-72, and the other of financial aid applicants who were college freshmen in 1972-73, were used. The relation between family income and college cost was examined. The relation of students' family income and educational development to characteristics of the college attended and chosen was considered. A third issue studied was the interrelationships of various college characteristics, including average student family income, cost, and mean ACT Composite scores. These subjects were addressed using both of the data sets and contrasts in findings are noted where appropriate. Discussion includes review of study limitations and exploration of study implications both for common assumptions about college-going and for research and policy questions.
For the nation’s college-bound students, it has become a buyer’s market. Most colleges are concerned about enrollments; no longer can the typical college select its students from a vast pool of applicants. Now, instead, the student may choose among a number of alternative colleges.

Despite this trend, very little is known about how and how well students choose or match themselves to colleges and universities. Although much is known about individual differences among students and about individual differences among colleges, the ways the two “mesh” are obscure.

Given certain characteristics of college-going students (such as their educational development and their family income) and given certain characteristics of colleges (such as costs, average educational development of the student body, and average family income of the student body), how are college-bound students distributed in various colleges and universities? What college characteristics act as barriers and which as magnets to student enrollment? What is the impact of financial aid on these relationships?

Educators make a number of assumptions about the relationships among student income, student educational development, and college costs. Undoubtedly, these assumptions vary in their validity, but very little information is available to help answer the many questions of educational and social policy related to such assumptions. The purpose of this study is to examine objective information about the relationships among these variables both for a national sample of college-bound students and for a sample of college-bound students who were also financial aid applicants.

Method

Data Set 1: College-Bound Students

Two samples of college students were used. The first sample consisted of college students who for the most part were first-time freshmen in fall 1972. Most of these students had written the ACT Assessment in 1971-72 as high school seniors. The sample was drawn from the rosters of the ACT Class Profile Service prepared for 1,200 colleges and universities on their freshmen who enrolled in fall 1972. By sampling after college entry, we were able to obtain information about college attendance as well as about student characteristics from the basic ACT Assessment record. For each of the 1,200 institutions, student records were ordered either by Social Security number or alphabetically. Every tenth record was pulled for the study. The resulting student sample approximated a 10% sample of
freshmen attending ACT-participating post-secondary institutions in 1972. While not completely representative of American postsecondary education, the sample was probably reasonably representative in the Midwest, South, and West. The information available for each student included students’ estimated family income, ACT Composite scores, and rank ordering of first, second, and third for three college choices (ranked before enrollment). These college choices reflect not only ideal preferences but also reality factors, because typically, students who identify a college as first choice have six chances in ten of enrolling, students who identify a college as second or third choice about two chances in ten. The information about colleges came primarily from group statistics in the Class Profile Service. For example, for enrolled students at these colleges, the distribution of estimated family income and means and distributions for ACT Composite scores were available. From ACT’s Student Assistance Program, we obtained college costs that each institution had submitted to ACT to permit determination of student need at individual institutions. The cost of attendance included tuition, room, board, and supplies for a 9-month budget. We considered each college budget in terms of a typical college student, and made the assumption the student would be full time, resident on campus, family dependent, single, and an in-state resident. College budgets were available for 1,497 colleges (most located in the Midwest, South, and West), and were ranked by quartiles for analysis. The figures for first, second, and third quartiles were $1,525, $2,048, and $2,718, respectively. If a student had no college choices or if the college of attendance had supplied no budget information, the student’s record was deleted. Records were included for as many analyses as possible.

Data Set 2: Financial Aid Applicants

The second sample, which consisted of 2,384 college students who were financial aid applicants, had been drawn for the College Investment Decision Study conducted by McMahon and supported by the U.S. Office of Education, National Institute for Education, and the ACT Program. It included students for whom both the ACT Assessment and the ACT Student Assistance Program records were available and is described by McMahon and Wagner (1973). Like the first sample, these students were college freshmen in 1972-73; the same data elements on students and colleges were available. The sample is not representative of college students generally; it was drawn to overrepresent students from low-income and minority backgrounds. All students in the sample were aid applicants in the sense that they had filed a Family Financial Statement with ACT, and had asked that their financial need be communicated by ACT to designated colleges as a part of their application for financial assistance.

Analyses

The first question to be examined concerned the relationship between family income on the one hand and cost of college attended and other colleges of interest, on the other. To examine this relationship, we first charted the percentage of students from each of eight family income levels who were attending or interested in high-cost colleges. The percentages were charted separately for each of the two samples. A high-cost college was defined as a college in the upper half in cost among the 1,497 colleges for which these data were available. The relationship between family income and college cost was further examined through the correlations of the two variables in the 10% sample and the financial aid applicant sample.

The second major issue was the relation of the student’s family income and educational development to characteristics of the colleges attended and chosen. For this examination, the percentages of students for each of eight family income levels who were attending colleges with high mean family incomes were charted. The percentages of students from different levels of ACT Composite scores attending colleges with high mean ACT Composite scores were also charted. Relevant correlations were also examined.

The final major issue was the relationship of the college characteristics to average student family income, cost, and mean ACT Composite scores. Intercorrelations of these variables were computed.

As a preliminary validity check on estimated family income, this item was correlated with mother’s occupation, mother’s education, father’s occupation, and father’s education, for a sample of approximately 1,000 students (the number varied according to which data on each set of two variables was available) who participated in the ACT Career Planning Program 12-13 in 1973-74. The correlations were 28, 24, 31, and 26, respectively. The sample, which was composed of applicants to community college career programs, contained a disproportionately large number of students from lower socioeconomic backgrounds.
College Cost and Family Income

Table 1 presents information about the relationship for college students generally between family income on the one hand, and cost of college attended and other colleges of interest, on the other. The table gives the percentages of students in each family income interval who attended and expressed interest in a high-cost college.

From this table several observations are possible. At all income levels, students are interested in colleges whose costs are higher than those of the college they actually attend. The discrepancy between cost of college attended and cost of first choice college is greatest at the low end of the family income distribution and least at the high end. There is a slight general tendency for cost of college attended to increase with family income, though the tendency is more marked at the income extremes. Finally, the first, second, and third choices of college are more similar in cost at the high income levels than at the other income levels.

In general, these conclusions confirm common assumptions about family income and college costs. For example, people are interested in colleges which are more expensive than those they can afford. And, we would expect college cost to interfere with attendance at college of choice to a greater extent at low income levels than at other levels.

Table 2 provides data on these relationships for the sample of financial aid applicants. Unlike college students generally, more aid applicants at the lower income levels are attending high cost colleges than indicated such colleges as first, second, or third choices. Low-income applicants have the greatest chance for large amounts of aid. In the middle- to high-income levels, the relationship between cost of college attended and first choice college is similar to that found for college students generally; students are interested in a college whose costs are higher than those of the college they actually attend. At the upper income intervals, however, there is a considerable discrepancy; far more aid applicants indicated a high cost college as first choice than actually attended. There is a general tendency for cost of college attended to increase with family income, as was the case with college students generally, though differences noted at the extremes are not in a direction consistent with this relationship. Overall, the relation between family income and cost of college of first choice is closer for the financial aid applicant group than for the college student group generally, the higher the income, the greater the percentage preferring a high-cost college. Finally, the relation between and among choices, enrollment at high-cost colleges, and family income, are not so orderly for the financial aid applicants as for students generally. Not only are different things happening at different income levels, but relationships among choices and enrollment are not consistent.

Some of these findings agree with common assumptions about financial aid applicants and the impact of aid on the relation between family income and college costs, and some do not. The sizeable percentage of low-income students who attend high-cost colleges, in contrast to the percentage who indicated these colleges as their first choice, would not be anticipated by many. It probably is a function of financial aid.

Table 3 presents data for college-bound students generally. Intercorrelations among the student characteristics (family income and ACT Composite score) and characteristics of colleges chosen and attended are reported. College characteristics include college cost, average ACT Composite score of freshmen, and indicator of student family income defined as percent of freshmen with family income over $9,000 per year. The correlation between students' family income and cost of college attended is a surprisingly low .07, and runs counter to the common assumptions that lower income students attend low-cost colleges and rich students high-cost colleges, and that in between these extremes, the relationship is linear.

Table 1 did confirm this assumption at the extremes of income, but the correlations show the relationship to be very small overall. The correlations between family income and the cost of colleges students indicated as their first, second, and third choice are also low—.05, .09, and .04, respectively. The relationship among the college applicants with family income over $9,000 per year is consequently underestimated, because of the large percentage of students who did not respond to the item.
TABLE 2

Percent of Financial Aid Applicants by Family Income Attending and Interested in a High-Cost College

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<tr>
<th>Family Income</th>
<th>Low</th>
<th>High</th>
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<td>$5,999</td>
</tr>
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<td>$6,000-$7,499</td>
<td>$7,500-$8,999</td>
<td>$8,999</td>
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<tr>
<td>$7,500-$9,000</td>
<td>$9,000-$11,999</td>
<td>$11,999</td>
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<tr>
<td>$9,000-$12,000</td>
<td>$12,000-$14,999</td>
<td>$14,999</td>
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<tr>
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<td>$15,000-$19,999</td>
<td>$19,999</td>
</tr>
<tr>
<td>$15,000-$20,000</td>
<td>$20,000 and over</td>
<td></td>
</tr>
</tbody>
</table>

- Financial Aid Applicant Sample
- Attended high-cost college
- First choice high-cost college
- Second choice high-cost college
- Third choice high-cost college
### TABLE 3

Intercorrelations among Student Characteristics and Characteristics of Colleges Attended and Chosen as First, Second, and Third Choice by College-Bound Students Generally

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<tr>
<th></th>
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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>Mean</th>
<th>SD</th>
<th>N-Students</th>
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<td>09</td>
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<td>18</td>
<td>17</td>
<td>36</td>
<td>13</td>
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<td>14</td>
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<td>34</td>
<td>15</td>
<td>12</td>
<td>03</td>
<td>04</td>
<td>01</td>
<td>01</td>
<td>24</td>
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<td>6,930</td>
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<tr>
<td>Budget for College 2nd Choice b</td>
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<td>10</td>
<td>13</td>
<td>14</td>
<td>35</td>
<td>13</td>
<td>03</td>
<td>03</td>
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<td>02</td>
<td>23</td>
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<td>11</td>
<td>09</td>
<td>13</td>
<td>36</td>
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<td>00</td>
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<td>33</td>
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<td>07</td>
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<tr>
<td>ACT Composite at 2nd Choice College</td>
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<td>08</td>
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<td>% of Student Body above $9M at College Attended</td>
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<td>31</td>
<td>30</td>
<td>28</td>
<td>38</td>
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<td>10</td>
<td>0</td>
<td>0</td>
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<tr>
<td>% of Student Body above $9M at College 1</td>
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<td>34</td>
<td>26</td>
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<td>27</td>
<td>40</td>
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<td>10</td>
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Note. Correlations in each case are based on the maximum N-counts for each set of two variables. Decimals are omitted in reporting correlation coefficients.

*Students were excluded and do not appear in the N-count if they left item blank or reported they did not know or considered this information confidential.

bNot all students indicated three college choices, many reported less
characteristics was similar. Family income (percent of students with family income above $9,000) and cost correlated .06, .04, .05 and .07 respectively for college attended and colleges of first, second, and third choice.

Similarly, low correlations were found for the financial aid applicant sample. These correlations reported in Table 4 were .03 between student family income and cost of college attended. In addition, the correlations between students' family

### Table 4

Intercorrelations among Student Characteristics and Characteristics of Colleges Attended and Chosen as First, Second, and Third Choice by College-Bound Financial Aid Applicants

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<td>0.02</td>
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<tr>
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<td>0.02</td>
<td>0.02</td>
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<td>0.04</td>
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<td>ACT Composite at 1st Choice College</td>
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<td>ACT Composite at 2nd Choice College</td>
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<td>0.02</td>
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<td></td>
</tr>
<tr>
<td>ACT Composite at 3rd Choice College</td>
<td>0.04</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
</tr>
<tr>
<td>% of Student Body above $9M at College Attended</td>
<td>0.00</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>% of Student Body above $9M at College 1</td>
<td>0.00</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>% of Student Body above $9M at College 2</td>
<td>0.00</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>% of Student Body above $9M at College 3</td>
<td>0.00</td>
<td>0.02</td>
<td>0.04</td>
<td>0.02</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
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</tbody>
</table>
income and cost of college given at first, second, and third choice were 17, 81, and 8 respectively.

All these results considered together indicate a surprising lack of relationship between family income and college attended or selected by students. These results suggest that one assumed influence on college choice may not be so restrictive as is commonly believed.

Table 6 shows that students from families with high incomes attended colleges that enroll a sizeable number of students from above-average incomes. Correlations, reported in Table 3 between students' family income and average family income of enrolled students (the percent of enrolled students with income of $9,000 or more) were 33, 28, 22, and 19 for college attended and college of first, second, and third choice, respectively. This represents a low to moderate relationship. Students tend to sort themselves or are sorted among colleges on the basis of family income, a type of social stratification. Considering the relationship along with the observed lack of relation between student family income and college cost it appears that the operating stratifying variable is not cost of college but social background (or family income) of students who attend.

There is a tendency for students to be stratified not only by family income but also by educational development as measured by test scores. Table 6 charts the relationship of student educational development to attendance at a college enrolling large numbers of students with high educational development. A clear relationship can be observed. Further, Table 3 shows students ACT Composite scores were correlated .46, .39, .27, and .21 with mean ACT Composite scores at colleges attended first, second, and third choice, respectively. Educational development joins social background as a major stratifying variable in student choice of and attendance at particular colleges.

To portray in another way the relationships among family income, educational development, and cost of college attended, Table 7 was designed to show quartiles on college costs across the top, and student groups defined as combinations of extremes of the distributions in family income and educational development down the left hand side. As would be expected, more students from high-income and high educational development backgrounds attended a high-cost college than did students from low-income and low educational development backgrounds. Two conclusions, however, are not common knowledge. First, students are quite dispersed on these dimensions—30% of high-income, high educational development students attended a low-cost college and 4% of low-income, low educational development students attended a high-cost college. Second, educational development was more potent than family income in attendance at high-cost college a conclusion that confirms previously reported correlations. This table is also pertinent to the questions of whether enrollment would increase if college costs decreased and what kinds of students would be affected by such a trend. Because more students attend low-cost colleges it is also possible to anticipate future larger enrollments if costs go down. The additional students would likely come from diverse backgrounds. From all four student groups, the largest group would be students whose family income and educational development are low, the new student in higher education.

For the sample of financial aid applicants family income was not related to the average family income at college attended. The correlation, given in Table 4 was .01, and contrasted with the finding for college students generally. The aid applicant's family income was related to the average family income at colleges given as first, second, and third choice (correlations of .33, .24, and .19, respectively). Similarly, the relationship between an applicant's educational development (ACT Composite score) and the average educational development (mean ACT Composite score) of students enrolled at college attended is low (correlation of .44). Further, it is low for colleges that were first, second, and third choices. (correlations of .43, .27, and .29, respectively)

It appears that in college choices, if not in college attended, aid applicants are sorting themselves by family income and educational background just as college students generally do both for college attended and college choice. The difference here for college attended is presumably the result of the intervention of financial aid. Without financial aid, these applicants would attend their first second, or third choice college where the student is similar to them in family income and educational development. With financial aid these applicants attend other colleges where on these dimensions they are unlike enrolled students.
TABLE 5

Percent of Students by Family Income Attending a College Enrolling Students from Upper-income Families
(Percent of Students from Families with Incomes of $9,000 or More Is 50 or above)—
College Students Generally
TABLE 6

Percent of Students by ACT Composite Attending a College Enrolling Students with High Educational Development (ACT C Mean > 22)—College Students Generally

<table>
<thead>
<tr>
<th>ACT Composite Standard Scores</th>
<th>Percent of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 8</td>
<td>10%</td>
</tr>
<tr>
<td>9-11</td>
<td>20%</td>
</tr>
<tr>
<td>12-14</td>
<td>30%</td>
</tr>
<tr>
<td>15-17</td>
<td>40%</td>
</tr>
<tr>
<td>18-20</td>
<td>50%</td>
</tr>
<tr>
<td>21-23</td>
<td>60%</td>
</tr>
<tr>
<td>24-26</td>
<td>70%</td>
</tr>
<tr>
<td>27-29</td>
<td>80%</td>
</tr>
<tr>
<td>30+</td>
<td>90%</td>
</tr>
</tbody>
</table>
### TABLE 7

College Attendance, by Quartile of College Cost, for Students at Income and Educational Development Extremes

<table>
<thead>
<tr>
<th>Student Groups</th>
<th>College-Cost Quartiles</th>
<th>Low (Q1)</th>
<th>(Q2)</th>
<th>(Q3) High</th>
<th>(Q4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) High Income and High Educational Development Students</td>
<td>N</td>
<td>358</td>
<td>364</td>
<td>356</td>
<td>108</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>30.2</td>
<td>30.7</td>
<td>30.0</td>
<td>9.1</td>
</tr>
<tr>
<td>(2) High Income and Low Educational Development Students</td>
<td>N</td>
<td>257</td>
<td>251</td>
<td>49</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>37.0</td>
<td>36.2</td>
<td>21.5</td>
<td>5.3</td>
</tr>
<tr>
<td>(3) Low Income and High Educational Development Students</td>
<td>N</td>
<td>188</td>
<td>179</td>
<td>139</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>34.5</td>
<td>32.8</td>
<td>25.5</td>
<td>7.2</td>
</tr>
<tr>
<td>(4) Low Income and Low Educational Development Students</td>
<td>N</td>
<td>629</td>
<td>581</td>
<td>274</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>PC</td>
<td>40.6</td>
<td>37.5</td>
<td>17.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Total N = 3,974

**Definitions of Student Groups**

- **High Income** $\geq$ $15M
- **High Educational Development** $\geq$ ACT C 23
- **Low Income** $< $6M
- **Low Educational Development** $< $ ACT C 16
Relationships among College Characteristics

Relationships among college characteristics themselves are of interest. Table 3 shows the relation between average educational development (mean ACT, composite test scores) and average family income (percent of students with family incomes above $9,000) at colleges. Correlations were .39, .45, .46, and .49 between average educational development and average family income at college attended, and first, second, and third choice colleges, respectively. For individual students, the relation between educational development and family income was considerably less pronounced. The correlation was .22. This implies again that students sort themselves (or are sorted by colleges) on the basis of two dimensions: educational development and family income.

Discussion

Limitations

There are two major limitations to this study. One is that as the source of students' family income, we relied upon student estimate of family income. A full 30% of students did not know their family income or preferred not to respond. Women in particular often did not know their family income. More important perhaps is that students may not have accurately estimated their family incomes for a variety of reasons. The correlations between family income and other indices of socioeconomic status, such as father's occupation and parent's education, are small to moderate and have already been reported. The results would indicate that we can have some confidence in the use of students' estimated family income, particularly in an exploratory study such as this, but a more firm index of family income would be desirable.

The second major limitation is that college costs as used in the study are more gross than they might actually be. We assumed that all students were living in residence, simply because this is the case for most college students. However, many students attending community colleges and some state and municipal universities commute, in this case, their room and board costs are borne by their families and do not represent a cash outlay. Further, some students receive financial aid, which likewise reduces college costs. Neither of these factors in reducing college costs was taken into account in this study, for the analyses relating student characteristics to college costs. Although financial aid applicants as a group were considered, we did not know or consider the amount of aid each applicant received.

This second limitation means that our results are not directly applicable to much of the current discussion on low tuition versus full costing accompanied by financial aid for needy students. Given the absence of refinements in family income and college costs, however, the results of this study show the relationships between student background and college characteristics, including cost, to be subtle and complex, and not nearly so straightforward as the proponents of either of the points of view sometimes suggest.
Previous research has focused on the distribution of students from various ability and socioeconomic status (SES) backgrounds among various kinds of colleges. (Such research is called “demand studies” by economists.) Two examples are Radner and Miller (1970) and Mundell (1974). Both use 1966 Project Scope data applicable to high school seniors in four states. Although the research is somewhat dated, the results are useful particularly for the development of models of college-going; the major focus of these investigations. They suffer other problems common to research in this area—in the definition of family income and of student ability, sampling problems, and lack of information about financial aid. Radner and Miller report results for California, one of the four states studied, which show a probability distribution of student college choices by student background (income and ability) into various kinds of colleges, defined in part by cost. These results are consistent with the results reported here, in that they show considerable dispersion of students among the variety of colleges. Mundell’s approach is similar to the Radner-Miller approach, but is more sophisticated in that it includes additional student and institutional variables believed significant in college choice and attendance.

The analytic model in the report of the National Commission on the Financing of Postsecondary Education was based on the Radner-Miller article. In addition, the report of the Commission included tables obtained from data from the Bureau of the Census and Project Talent showing distribution by family income of students in various types of colleges, corresponding roughly to college costs. Tables are provided showing this information by race and including non-college-bound students. In general, these tables yield data consistent with those reported here. There is great dispersion of students by family income and race among all types of colleges, though there is a tendency for students from low-income backgrounds to attend low-cost colleges (public 2-year colleges); the reverse is true for students from high-income backgrounds. The decision to attend or not to attend college is different from the decision of which college to attend; socioeconomic factors would be expected to play an important role in the former decision.

Other research found in the literature of social mobility offers some help in understanding relationships among college-going factors, primarily because it describes a similar phenomenon.

Is College Choice Analogous and Related to Social Mobility?

Studies of the relationships among family income, educational development, and college costs in college-going behavior of young people resemble studies of social mobility (Blau & Duncan, 1967) in several ways. In these studies SES of origin and ability do not directly determine SES attained, but rather SES and ability, through the intermediary of amount of education, determine occupation which in turn determines SES attained. One could view the cost of college attended as the outcome related to SES attained. Though educational development and family income are moderately correlated, family income itself is not related to attendance at a high-cost college except as it operates through educational development. While the consequences to a student of attending a high-cost college have not been documented, it is widely believed by parents that a high-cost college does more for a student, in that in various ways it enhances upward mobility. Exactly how the high-cost college helps a student is not clear, and as a result, the tie between college cost and SES attained or success defined in any way is not explicit.

Summary of the Findings

The major general findings of this analysis may be summarized as follows.

1. The majority of students at all income levels attend low-cost colleges. Thus, changes in stu-
1. Student costs at these institutions would touch many people and have great potential impact.

2. There is little relation between the cost of college attended and students' family income. This is true for college students generally, and for aid applicants as well. College costs have the most significant impact on college attendance at the extremes of the income distribution.

3. Students sort themselves in college choice and attendance (or are sorted by colleges) on the basis of two dimensions: educational development and family income. In other words, college students generally enroll, and identify, as college choices, colleges that enroll students who 'are like them in educational development and family income. This is true of college students generally, but not of financial aid applicants.

4. Average student educational development has a moderate and consistent relation to college costs, both for college-bound students generally and for aid applicants.

5. Financial aid applicants enroll at colleges whose students are different from them with respect to educational development and family income. The latter finding would be expected. The former, which would not likely be anticipated, was the biggest difference found between financial aid applicants and college students generally, and is presumed to be the result of the financial aid award.

Assumptions about College-Going Not Confirmed

These findings are at odds with a number of assumptions commonly made about college-going students. For example, consider the following.

1. College cost is a significant barrier to needy college-bound students and causes those who attend to choose a college, on the basis of their ability to pay college costs. It follows from this that students' family income would be highly correlated with costs of colleges attended. The data reported here show, however, that students' family income is not highly related to the cost of college attended, perhaps in part as a result of financial aid programs.

2. Students tend to choose a college primarily because of its location, i.e., close to home. It follows from this that most of the relationships between student and college characteristics would be negligible, because students and colleges are essentially randomly distributed geographically. The data reported here do not confirm a random match of student and college characteristics. Although location may be an important factor in college choice, there may be several colleges in a given area, so that students may choose on the basis of college characteristics other than proximity.

3. Financial aid helps needy students enter colleges where they are similar to other students, except for their financial need. Students receiving financial aid were found to be different from other enrolled students with respect to educational development as well as to family income.

4. Colleges, individually and collectively, have student bodies of diverse socioeconomic status. Though only a few colleges today employ selective admissions officers, we would expect admissions officers at these colleges to select students on the basis of their educational development, test scores and high school rank, and to be alert to these students no matter what their socioeconomic status. We have been told these colleges are interested in the "talented poor." The resulting student mix on campus might be homogeneous with respect to educational development but certainly heterogeneous with respect to socioeconomic status. Analyses of college student bodies have shown that family income and educational development go together, institution by institution.

Assumptions about College-Going Confirmed

At the same time these findings confirmed a number of common assumptions about college-bound students, their choice process in selecting a college, the influences that impinge on them and the nature of higher education. For example, consider the following assumptions, supported at least in part by the data presented here, which seem to correspond to popular impressions of colleges and college-going youth.
1. People tend to go to the college their relatives or friends attend or have attended. Friendship patterns and relatives reflect general matches on socioeconomic status and probably on educational development. Students select colleges where there are people like themselves, specifically where friends attend or have attended.

2. Teachers and counselors who work with high school students often feel that the students' perceptions about colleges are more accurate than is commonly acknowledged. The student grapevine, the informal communications network, information about how colleges differ in important ways—may be quite accurate.

3. Social institutions reflect the stratification system operating in society, in terms of the people they serve, their diversity, and their purposes. Family income is a key part of the stratification system. Colleges as social institutions are no exceptions, and consequently it is not surprising that colleges reflect the stratification system.

Research and Policy Questions

These findings do raise a number of serious questions. They are as yet unanswered and are of such importance that their ultimate resolution may change, not only some of our assumptions about college-bound students and the colleges they attend, but also our educational practices and public policy. Among such unanswered questions are the following.

1. How do students get reliable information about colleges? Information about the average family income and educational development of students enrolled at various colleges is nowhere explicitly published. 

2. What is the consequence of most students attending a college whose students are primarily like themselves, i.e., of the same social and educational background? Although the impact on students is not clear-cut, one would think that such a situation would confirm or accentuate existing tendencies, for colleges do accentuate traits students bring with them. (See Feldman & Newcomb, 1969.) Does this make it more difficult for college graduates to work and play with people from social and educational backgrounds different from their own? If so, does college unduly contribute to the stratification system?

3. Do financial aid applicants face adjustment problems in college? What are the consequences when the aid applicants go to a college whose students are not similar to them, especially when aid applicants are dissimilar in ways they cannot readily change. For example, aid applicants cannot easily change their educational or social background. If attendance at a college whose students are from similar backgrounds accentuates relevant traits, might not attendance at a college with students from dissimilar backgrounds generate alienation, defensiveness, and frustration? Average effects on student development caused by dissimilarity, as well as individual differences in effects, are not well known.

4. What problems beset the college that enrolls large numbers of students on financial aid? It would appear these colleges are faced with many students who have academic problems; the aid applicants have a lower level of educational development than the college's typical students. For the college to adapt to these students and devise suitable learning strategies for them will require money and experience, neither of which most colleges have. This requires a level of college support for the student on financial aid that goes beyond the student award and the administration of the financial aid program.
References


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