

Speerkes.

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STUDENT DIVERSITIES

This morning we talked about the ways in which students are like each other--the ways in which we can group them together along some dimensions that have special relevance for education.

This afternoon I would like to concentrate on the ways in which students differ from each other--those attending junior colleges differ in measurable ways from those attending universities; liberal arts college students differ from students in technical institutes; we can show regional differences indicating that colleges in the northeastern part of the country, for example, have somewhat different student bodies from southern institutions; students choosing to major in physical education differ from those who select the humanities; the sons of red-caps have different characteristics from those of wall street financiers.

There is, of course, no national system of higher education in this country. *it is more nearly a collection of colleges & a S.* We are perhaps best characterized by our great diversity. No where else on earth do so many students have such a cafeteria of choices in colleges as they do here. And the diversity of American higher education can be regarded, at one and the same time, as our greatest strength and our greatest weakness. If we knew more about the characteristics of students and the learning environments of colleges, we could presumably direct students to the college which would most nearly fulfill the potential of the student. Here diversity is a strength. On the other hand, although we speak of a college degree as a *standard of achievement* requirement for a great variety of jobs, such a *standard* requirement is, in reality, meaningless. *it means next to nothing* While a college degree may mean--in most instances--120 credit hours, it doesn't mean anything about the education of the student. The entering

students at some colleges measure higher on almost any dimension of the "educated man" that you care to select than the graduates of other colleges.

Here the freedom in standards could be considered a weakness. Almost $\frac{1}{2}$ of the colleges in this country are unaccredited, and many graduates of such colleges are in a very real sense educationally disadvantaged. *Not a college edun - opposite college degree*

All of you are probably aware of the research of the 1950's which attempted to identify the most "productive" colleges--usually in terms of the proportion of the graduating class going ~~on~~ for graduate study or other scholarly endeavors. It didn't take long to discover, however, that the primary difference between a "productive" and a "non-productive" college was present in its freshmen class. It is easier to show that output is a function of input than it is to show that the educational process on the campus "makes a difference."

If a college has many graduates going on to graduate school it is due, in part, to the fact that it attracts the kind of freshmen who ^{are} ~~is~~ interested in graduate study. Students choose colleges and in so doing determine, in part, the learning environment of the campus.]

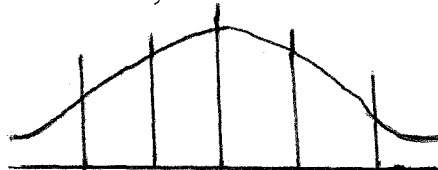
Most students--almost half--attend state universities and colleges; 5% are in selective prestige liberal arts colleges; another 10% are to be found in the remaining liberal arts colleges; 5% are enrolled in strongly denominational colleges--Roman Catholic and others; 10 to 15% attend technical institutes, and the remaining 20% of the college enrollment are students at junior colleges.

In much the same way that the small minority of student protesters gets the great bulk of publicity, so the minority of prestige colleges and universities get more than their share of notoriety and money. Forty percent of all doctorates

are granted by only twelve universities, and these same twelve universities get one fourth of all federal research funds; one-half of all student applications for admission are sent to some 10% of the colleges. It has been estimated that perhaps 1/10 of the colleges and universities--some very large and some very small--dominate higher education, quantitatively and qualitatively. We've been aware of the diversity of the types of colleges in this country--but only recently have we become aware of the diversity of their student bodies.

One of the most significant characteristics of students--for educators at least--is academic ability. Since knowledge and measurement of the intellectual characteristics has a good fifty-year headstart on the study of non-cognitive characteristics, a brief discussion of the diversity of academic abilities may make a good starting point.

The one fact that stands out above all others is that higher education is dealing with an all but overwhelming diversity in the academic potential of its students. There are accredited colleges with student bodies whose mean score on the College Boards is in the lowest 2% for college students throughout the country; there may be 1% or 2% of the students at such colleges who score as high as the average college student. On the other hand there are colleges who have no students scoring as low as the national average. The mean SAT scores at more than one college this year stood at the 95th percentile. In other words, at some colleges the educational program and classroom instruction must be geared for the lowest 5% of the college-going population; in others it must be designed for the top 5% in ability. And at many state colleges and universities it must cover the entire range. At many universities, students abilities run the full gamut; from barely able to genius.



Although these are extremes, they do exist. In actual practice a number of factors operate to narrow the range of abilities which might appear on a given campus. There is an ordering of abilities by region of the country for example. If one simply lumps all students in a geographic section and compares the mean scores on academic aptitude tests, colleges in the northeast have, on the average, a more able student body than colleges in the south. When colleges are grouped according to the level of instruction offered, one finds undergraduate students attending institutions offering the doctor's degree scoring higher than those offering the master's, who in turn score higher than students at bachelor's granting institutions, who have higher mean scores than those attending two-year colleges. If one wishes to group colleges according to type of control, entering classes would show private colleges at the top, public institutions at the bottom, and church related (both Roman Catholic and Protestant) in the middle.

Let me be very careful to point out, however, that while the mean scores on various aptitude tests tend to fall into these patterns with some consistency, the differences between groups ^(i.e. northeast vs south) is small, whereas the difference between individual colleges in a given group may be very large indeed. For example, in a single geographical region of the State of California, institutional means range over a full three standard deviations--or from about the fifth to the ninety-fifth percentiles. The difference between the mean ability scores for all students in California colleges compared with the mean ability of all students in Mississippi colleges would not be nearly that great. Nevertheless, the chances are pretty good that the students at a private northeastern university granting the doctor's degree have greater academic ability than the students in a public junior college in the south.

The field of academic specialization will also have some influence on the general level of ability showing up in the classroom. The findings from a variety of studies are remarkably consistent; the average intelligence test scores of major groups fall into an order with the physical sciences, engineering, and mathematics at the top, followed by literature and the social sciences, with the applied fields--agriculture, business, home economics, and education at the lower end of the scale. Again though, the old cautions--there are extremely bright students in every major.

There are of course factors other than academic ability which come into play in the choice of a major and these factors often confuse our neat statistics. Sex is a notable example. While a study of National Merit Scholars found that most of the highly talented men (63%) majored in the physical sciences, it showed that only 32% of the female scholars chose the sciences. But--and this is important--the female NMS^{no. 4} choosing the sciences was far above the national average for women. While the National Merit Study shows almost one-third of their women in science, project talent (which is a national 5% sample of all high school students) shows only 10% of their college women majoring in science. (Project Talent figures for men in science are 33%.)

The major point to be noted in this discussion of the intellectual characteristics of college students is that students do sort themselves out--geographically, by field of study, by type of college, etc. While one might claim that we find the brightest students in the private colleges and universities of the northeast because these are the most selective institutions, this is only part of the story. College admissions is a two-way process and most of the decisions about the entering classes of a given college are made--not in the college admissions office--but rather in the homes and high schools of graduating seniors throughout the country. As one energetic researcher figured it, Harvard exercised its

option of selectivity by accepting only one of three qualified applicants. But the real selectivity came in the fact that only one of every forty qualified students applied to Harvard. By actual arithmetic; this leaves 145,000 students who would have qualified for admission to Harvard but who did not even let Harvard know of their existence.

But if it is obvious in the academic ability realm that students do a great deal of self-selection, it is becoming increasingly apparent that the same type of self-selection process operates in the non-intellective areas. We know, for example, that students from families of the lower SES tend to choose junior colleges over four-year colleges, tend to be interested in applied rather than theoretical fields of study, and tend to drop out of college more frequently than do children of middle and upper occupational families.

Because ~~of~~ the socioeconomic background seems to be so all-important in who goes to college, where they go, and even why they go, let me start with a brief survey of what we know about the influence of SES level on educational aspirations and accomplishment.

For this discussion, I'm going to draw largely from a study just completed at the Center for Higher Education by Leland Medsker and James Trent. Starting in 1959 they took a long look at 10,000 high school graduates in 16 communities across the United States. These students were followed through the next four years, with some of the following questions in mind. Who went where to college? Who didn't go to college? What characteristics differentiated those who stayed in college from those who dropped out? What difference do home and community have on college decisions?

In a nut shell, a Medsker-Trent research indicated that the home environment is a major determiner of the future education of the student--whether he goes to college, where he goes, and whether he stays. Shocking as it seems in this democracy, what the father does for a living has more to do with his son's college education than the student's academic ability or his high school record of achievement. The other factor that was as important as the father's occupation was the mother's education. The student from a home of higher socioeconomic categories was simply more likely to go to college than a student from the lower occupational levels, and the ability and achievement of the student did not overcome this background factor. The chance of a student from a family in the highest occupational levels going on to college was better than 70 percent--regardless of his ability; for the lowest occupational levels, his chance dropped to the low thirties--again regardless of ability. A poor student from a high occupational home was actually somewhat more likely to go to college than a good student of low occupational status (CHART).

Whereas most students from upper socioeconomic families entered college regardless of ability, most students from lower socioeconomic strata did not enter college--again, regardless of ability. If a high school student's father worked at a high occupational level, his chances of going to college ranged from 84% if he ranked in the top 2/5 of his class, to 57% if he fell in the lowest 2/5 in ability. On the other hand the bright child of a father with low occupational status had only a 41% chance of going to college; if he also had low ability, his chances for college fell to 20%.

But the father's occupation affected not only whether the child went to college but also had a great deal to do with where he went.

Graduates whose fathers were employed in high occupational categories tended to go out of town to private four-year colleges or to public or private universities. As you might expect, the educational attainment of the parents exerted a similar effect. College-educated parents tended to send their children to a private or public university. Students in public junior colleges and extension centers tended to come from parents with a high school education or less.

Religious preference of parents also affects the type of college selected. Almost $\frac{1}{2}$ of the Jewish group entered public universities as compared with 17% for Catholics and Protestants.

There is a vast body now of these kinds of data demonstrating the affect of socio-cultural-economic background on college attendance and educational values; and most of you would be able to hypothesize the direction of this influence with incredible accuracy. The point is that as the data pour in and the picture builds up there is good evidence that it is not the money for tuition and housing and expenses that is the primary determinant of who goes where to college. Rather, it appears to be the attitude of the parents toward education and toward things cultural.

Let me derive a few over-simplified charts from some other data at the Center for Research and Development in Higher Education to illustrate the point.

1. Extremely important to father that student graduate from college.

		Income		
		High	Low	
Family Cultural Sophistication	High	70	57	High = 15,000 to \$30,000
	Low	57	42	Low = \$7,400 or less

Cultural sophistication index includes father's education, grandfather's education and books in the home.

2. Extreme importance of college to the student.

		Income	
		Very high	Very low
Family Culture	Very High	81	76
	Very Low	60	65

3. Popular culture addition of student.

		Income	
		High	Low
Culture	Very High	44	32
	Very Low	71	54

Income has an additive effect.
Cultural sophistication has a depressive effect.

Popular culture includes liking for popular music, Reader's Digest, Life, Look, etc.

Despite the obvious evidence that what the parents think has a great deal to do with the educational values and aspirations of the youngster, I do not want to leave the impression that the occupational level of the father tells the whole story in college attendance and persistence. Many factors interact to form a complex pattern of educational motivations. The students personality, for example, has quite a bit to do with both the fact of college attendance and the purpose for it. It is quite possible, however, that much of the personality, as measured by the OPI may further reflect the value orientations of the home.

The college going group were distinguished from the non-college group by different profiles on all five scales of the OPI which were given to the group as high school seniors. In general the college group showed a greater liking

for reflective thought; they were more independent and unconventional; and the college women scored considerably higher on the complexity scale than their non-college counterparts. Even in high school the group that chose to go to college were more socially mature, more curious, more tolerant, more interested in abstract ideas, and had a higher theoretical orientation than those who did not continue their education. Above all, however, the students who went to college reported a much greater parental interest all along the line than those who did not go to college. One might think that once the student had made the decision to enter college, parental attitude wouldn't be so vital, but the story as told by the statistics is that for students remaining at college 70% of the parents had encouraged their attendance when they were in high school, compared to 48% for the dropouts, and 15% for the bright high school graduates who did not attend college.

It should not surprise student personnel administrators to know that the students who reported any kind of regular attention from teachers or counselors were those who were already highly motivated and strongly supported by their parents. I suspect that these were the students who came to the personnel offices. It seems to be an administrative fact of life, at least in my experience, that we tackle the problems that are immediately at our doorstep. These are frequently sufficient in number to keep us from looking any further. But the clear implication of this research is that the student personnel administrators must make provision in the program for reaching the able student who lacks cultural background and educational encouragement.

Nationally we have worked quite conscientiously to remove the economic barriers to higher education so that anyone who has the will to go to college

can find the way. Since World War II the criteria for selection to the colleges in the country have shifted from the ability to pay the tuition to the ability to do the academic work. And yet socioeconomic stratus is still a vital determiner of college education. What surprises us a little is that it is not so much in the "economics" anymore as in the "socio" that socioeconomic considerations have their effect. The fact is that now that many capable students can find a way to go to college, they cannot seem to find the will. The role of the college personnel worker in the original college decision is minimal of course, but his opportunity for working with the low socioeconomic student who has made the first step must be considered maximal.

Lets return for a moment to the typologies which we discussed earlier. Clark and Trow have been rather careful to point out that their typologies refer to sub-cultures on the campus and not necessarily to individual student types, that is, a student may move in and out of a sub-culture through his four years at college. It is quite apparent that colleges differ a great deal in the mix of sub-cultures. And it is in this sense that I speak of the diversity in American higher education. From the CSQ classification of the Clark-Trow typologies, I selected three types of institutions--a technical institute, a state college, and an independent liberal arts college for women.

TABLE 3

Percent of Clark-Trow Typology for Selected Institutions of Higher Education

	Total Sample	Technical Institute	State College	Independent Liberal Arts College(women)
	(N = 12,949)	(N = 236)	(N = 727)	(N = 110)
Vocational	27	48	21	7
Academic	19	14	12	47
Collegiate	51	34	64	15
Non-conformist	4	2	2	31

Another way of looking at student differences from campus to campus is to observe the profiles on the CSQ scales.

TABLE 4

CSQ Scale (In percentiles)

	FS	FI	PI	L	SC	CS	
Independent Liberal Arts (women)	85	80	85	95	70	98	94% on poetry
Moderately Selective Liberal Arts College (coed)	65	63	61	63	54	65	
Unselective Liberal Arts College (coed)	35	29	27	40	47	33	almost $\frac{1}{2}$ of the students said they didn't like poetry
Technical Institute (men)	32	58	55	45	40	32	

(Rough translation from p. 51 of CSQ Manual.)

I want to mention one further finding from this study because it will be of particular interest to those of you who work in junior colleges. This study was carried out in communities, matched in so far as possible for there similarity of cultural, economic, and demographic characteristics. Where they differ was in the type of public college which was present in the community. Four of the communities had junior colleges, four had extension centers, four had state colleges, and two had no public college at all.

As might be expected, high school graduates in communities with public junior colleges were the most likely to continue their education. In the junior college communities 53% went on to college; at the other end of the scale were the communities with extension centers where only 34% went to colleges,

and the towns with no public colleges where only 33% continued their education.

The contrast of the influence of the local college facilities was most vivid for high ability students from homes of different occupational levels. The type of local college did not make much difference for high ability students from high occupational homes. They were likely to go to college anyway. Even in the communities with no public colleges, 80% of the bright, high occupational level students went to college. In the case of the able student from a low occupational level, however, it varied from 53% going on in the junior college community to only 22% in the no college community.

It is reasonably clear from repeated research studies that there are measurable ^{going} background and personality traits which differentiate college/ students from the non-college group. It is also becoming well established that different kinds of students select different types of institutions.

If I have a single message that I have tried to get across in all of the data that I have thrown at you today, it is that the educational program of your college--both in and out of the classroom--must be designed for your students. In my opinion, student personnel workers, are still spending too much time on social regulations and the like and too little on assuming leadership for faculty and administrative understanding of the characteristics of the student body. If the Medsker-Trent data are generalizable (and I think that they are) it would mean, for example, that those of you who serve in a private university are likely to draw almost half of your students from the high occupational levels (managerial and professional), with all of the value system and interest and attitudes toward education that that implies. For those working in junior colleges, only about 16% come from high occupational levels with a great majority (63%) of students from the homes of small business owners, sales

and clerical workers, and skilled laborers. No college has very many students from the homes of semi-and unskilled laborers, but the public junior college certainly has the greatest proportion of these students who get to college. And the fact that the open-door of the junior college has been called the revolving door, is in all likelihood more a reflection on the home environment than on the college environment. Whereas 80% of the high school seniors entering private universities said that a college education was "extremely important" to them, only 43% of the seniors who entered public junior colleges gave a college education the same reading for importance.

If our diversity in higher education is to be an advantage, the college needs to take a look at what its purpose is and whose need it is serving. The CSQ scale data as well as the OPI data show quite consistently that colleges of the same generic type differ greatly among themselves. University of Georgia probably has a measurably different student body from the University of California at Irvine; California State Polytechnic probably differs from Michigan Tech; and St. Petersburg Junior College probably differs from Oakland Community College. With all of the means we have at our disposal for knowing something about our students, it is indeed sad that so few faculty in administration know the characteristics of their students either before or after treatment.

PERCENT ATTENDING COLLEGE BY OCCUPATIONAL LEVEL OF FATHER AND ABILITY OF STUDENT*

Student Ability Qualities	Occupational Level of Father		
	High	Middle	Low
Upper 40%	84%	59%	41%
Middle 20%	67%	42%	26%
Lowest 40%	57%	26%	20%

*Adapted from "The Influence of Different Types of Public Higher Institutions on College Attendance From Varying Socioeconomic and Ability Levels" by Leland Medsker and James Trent, Center for Research and Development in Higher Education, University of California, Berkeley, 1965.

PERCENT OF COLLEGE ATTENDANCE BY HIGH ABILITY STUDENTS AS A FUNCTION OF
OCCUPATIONAL LEVEL OF FATHER AND TYPE OF COLLEGE IN LOCAL COMMUNITY*

Type of College in Local Community	Occupational Level of Father		
	High	Middle	Low
Junior College	86	69	53
State College	89	65	41
Multiple Colleges	74	57	49
Extension Center	80	51	35
None	80	45	22

*Adapted from "The Influence of Different Types of Public Higher Institutions on College Attendance From Varying Socioeconomic and Ability Levels" by Leland Medsker and James Trent, Center for Research and Development in Higher Education, University of California, Berkeley, 1965.