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ABSTRACT

The study examined: (1) the effects of rural-urban background and social class on scholastic performance in college, and (2) the rural-urban differences in scholastic performance when controlled for social class, sex, and measured intelligence. Data originally collected by students' self-reports and administrative records for panel-designed researches at Stanford University (1958-1965) and the University of Oregon (1961-1967) were pooled for this study. The sample consisted of 645 students from "urban" backgrounds and 84 students from "rural-small town" backgrounds selected from all full-time, first-year, unmarried, native-born, Caucasian freshmen males and females between the ages of 17 and 20 attending Stanford University, the University of Oregon, or the Oregon Honors College. Major variables were rural-urban background, social class, measured intelligence, and academic performance. Results indicated that: (1) there are very slight rural-urban differences in high school and college performance regardless of sex and/or social class; (2) while neither rural-urban nor social class background is more important it is the combination of rural-urban background, social class, and sex that has more predictive potential; (3) the top one-third of the 12 types of achievers consists mostly of urban non-middle class female students while the lower one-third is composed of rural, middle class males; and (4) since college performance is influenced by college potential (which is affected by sex, class, and rural-urban background) selection effects are operative. (NQ)

RURAL-URBAN DIFFERENCES IN SCHOLASTIC PERFORMANCE IN COLLEGE

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INTRODUCTION

The importance of the rural-urban variable, which once occupied such a central place in sociological thought, has in recent years come increasingly into question. While some writers still attribute differences in the patterning of behavior to rural-urban background, others view such interpretations as spurious and see them instead as by-products of stratification effects.

The views expressed by Schnore (1966) and Gans (1962) are representative of the polarization of sociological thought today regarding whether to attribute differences in behavior to rural-urban or social class background. Schnore, who maintains that the type of community in which one is reared or assumes residence is predictive of a wide range of individual behavior, contends that numerous class-based differences in behavior, life-style, and psychological orientations observable in urban populations may be "disguised manifestations of more basic rural-urban differences (1966: 142)." Gans (1962), however, considers ways of life as functions of social class and life-cycle rather than of ecological attributes of the settlement type.

While the same contrasting perspectives are not directly found in studies assessing the impact of differential school effects on educational outcomes, these studies suggest again that there is disparate importance attached to the analysis of the rural-urban variable.

Blau and Duncan (1967: 263-265) as well as Ramsoy (1969) single out the importance of the rural-urban environment of the school in determining educational experiences, while they also acknowledge the significance of the socioeconomic variable. Others have emphasized the impact of the socioeconomic composition of the student body on educational aspirations and attainments (Wilson, 1959; Turner, 1964: 55-65; and Coleman et al., 1965: 298-325).

This research seeks to test these alternative perspectives with regard to one institutional context--that of higher education. Specifically, this study attempts to disentangle the effects of rural-urban background and social class on scholastic performance in college and to ascertain whether rural-urban differences in scholastic performance persist even when controls for social class, sex, and measured intelligence have been introduced.

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METHODOLOGY

The present research involves an analysis of data originally collected in panel-designed researches undertaken at Stanford University (1958-1965) and the University of Oregon (1961-1967).[1]

The general research strategy used here to assess the relative importance of the variables in question relies upon data furnished by students' self-reports and administrative records and involves pooling the three separate panels of undergraduates at Stanford University, the University of Oregon, and the Oregon Honors College.[2]

Sample

The commonly defined sample frame from which the three panels were selected consists of all full-time, first-year, unmarried freshman males and females who are Caucasian, native-born, and between the ages of 17 and 20. After adjusting the total N of the pooled sample in order to exclude students who could not be classified as to their social class or rural-urban background, to count only once those cases overlapping in both the Oregon Honors College and the general University of Oregon panels, and to exclude migrants,[3] the pooled sample was reduced from 999 to 729. This sample consists of 645 students from "urban" backgrounds and 84 students from "rural-small town" backgrounds.

Major Variables

Rural-Urban Background.[4] Initially, the information on rural-urban background was classified into six residence categories, patterned after Census for 1960.[5] For analytical purposes these categories were dichotomized, yielding the "rural-small town" and "urban" categories. The "2,500 to 10,000" Census category has been combined with the rural group to define the "rural-small town" designation used in this study; and the four categories classified by Census as "urban places" and "urbanized areas" constitute the present "urban" designation.[6]

Social Class. Social class is measured by the Index of Class Position (ICP),[7] which is based on the father's occupation and the student's subjective identification of the family's class position. The six categories on ICP have been collapsed into three for this study: upper (Classes I and II on ICP), middle (Classes III and IV), and lower (Classes V and VI).

Measured Intelligence. An approximation of measured intelligence was provided by students' scores on the Scholastic Aptitude Test (S. A. T.), taken to measure their verbal and quantitative abilities.

Academic Performance. Academic achievement was measured by the students' high school grade point averages, college first-year and cumulative grade point averages, and graduation from college (at the end of five years, maximum, from the date of matriculation). Role failure was measured by academic failure in college (i.e., academic suspension, probation, disqualification, or any combination thereof) and by college dropouts (i.e., a student who left school at some period in his or her college career, either disrupting or terminating his attendance).

RESULTS

In general the rural-urban differences in scholastic performance in high school and college are very slight for the students in this sample. The bivariate analysis reveals that rural students in the sample have a slightly higher level of high school performance than do urban ones. With regard to measured intelligence, the rural students on the average score higher on the verbal aptitude test but lower on the quantitative one. In college the urban students attain higher mean first-year and cumulative grade point averages and have a higher percentage of graduates than do their rural counterparts. In terms of role failure, rural students are more likely than urban ones to experience academic failure but less likely to drop out of college.

These rural-urban differences are generally not significantly affected when class and sex are controlled separately. There are significant rural-urban differences for the upper class students in the sample in mean high school grade point averages, for the middle class students in mean college grade point averages, and for males in graduation from college. More specifically, rural upper class students in the sample have significantly higher grade point averages in high school (alpha = .0005), urban middle class students have significantly higher first-year and cumulative grade point averages in college than rural middle class students (alpha=.05), and urban males are more likely than rural ones to graduate (alpha = .05). (See Tables 1 and 2.)

Regression analysis reveals that for each dependent variable the slope coefficients provide information that is consistent with the previously discussed results of the bivariate analysis and the method of elaboration using a separate control on sex and class.[8]

Toward A Typology of College Achievers[9]

The consistent differences disclosed by the bivariate and multivariate analyses controlling sex and class separately are summarized by the typology developed on the basis of an analysis using simultaneous controls on sex and social class. Although the rural-urban differences in scholastic performance are slight (see Tables 3 and 4), the combination of traits--i.e., rural-urban background, social class, and sex--give rise to distinctive achievement types. Thus using the results of the cross-tabulation (or breakdown of means) of each dependent variable with rural-urban background, controlling simultaneously for sex and social class--which yields twelve sex-class-rural-urban types--each type was ranked according to its relative performance on certain measures of academic performance.

The twelve sex-class-rural-urban types were ranked according to the relative performance of each type on these seven measures of academic performance: mean high school grade point average, mean verbal scholastic aptitude test score, mean college first-year grade point average, academic failure, drop-outs, graduation, and mean cumulative grade point average. The first two variables were combined to provide an indicator of college potential,[10] and the latter five provided measures of college performance.[11]

A mean rank for college potential and for college performance was then computed for each type; the mean ranks were then ranked, yielding one college potential and one college performance score for each type--the rank of the mean rank. This final score--the rank of the mean rank for each type--provides a concise summary of the academic performance for each type, permits a clear perspective for analyzing the performance of each type relative to that of the others, and contributes to the development of a typology of college achievers.

College Potential. Table 5 shows the ranking of each type's performance in regard to high school grade point averages and verbal S. A. T. scores, the mean rank for each type, and the rank of the mean rank for each type with regard to college potential.

It is clear from this table that in this sample the rural upper class female possesses the highest "potential" for college; the rural lower class female and the urban lower class female are the second and third highest in college potential.

It is also evident from Table 5 that the rural middle class male shows the least college potential of all the types; the urban middle class male is also deficient in college potential in this sample.

College Performance. The ranks for the relative performance of each type on the indicators of academic achievement are presented in Table 6 along with the mean rank for each type and the rank of the mean rank for each type in regard to college performance.

The rural upper class female and the urban lower class female are tied for the highest level of college performance; the urban lower class male is the next highest.

That the rural middle class male performed at the lowest level of all the types is also evident; the urban middle class male ranked eleventh.

Congruence Between Potential and Performance. Examination of the rank of the mean rank (rows) on Table 5 and 6 enables one to analyze the congruence between college potential and college performance for each of the twelve sex-class-rural-urban types. Such comparison reveals that selection effects are clearly operative in certain cases.

More specifically, the rural upper class female, who brought with her to college the highest level of "mental equipment," maintained the highest level of performance throughout her college career. The urban lower class female, who was third highest in college potential, outshines her potential by being tied with the rural upper class female for first place in college performance. The urban and rural middle class males, who went to college despite their indicated lack of potential, performed at the lowest levels in college.

There are two notably incongruent cases which fall far below what their ranking on college potential leads one to expect. The rural lower class female, who ranked second highest in college potential, fell to a low ninth place in college performance. The rural upper class male, who was the fifth highest in college potential, fell to tenth place in college performance.

CONCLUSIONS

The most obvious conclusion of this research is that there is no major systematic impact of rural experience per se on scholastic attainment in college even when contaminating factors have been controlled. In sum, results indicate that (1) there are very slight rural-urban differences in high school and college performance for the students in this sample whether or not sex and/or social class are controlled; (2) from the combination of rural-urban background, social class, and sex emerge distinctive types of college achievers in the sample--indicating that while neither rural-urban nor social class background is more important it is the combination of the traits that has more predictive potential; (3) the top third of the twelve types of achievers consists mostly of urban, non-middle class, female students; and the lower third of all the types is composed of rural, middle class males; and (4) since college performance is influenced by college potential--which is affected by sex, class, and rural-urban background--selection effects are operative.

Generalizability of the Results and Selectivity of the Sample

The methodological bias introduced by combining the small-town category with the rural category, because of the small rural N, may have reduced the amount of variance explained by the rural-urban variable by reducing the homogeneity of the rural category. In addition, on the basis of data available, no distinction could be made between the rural-farm and rural-nonfarm elements in the rural subsample.

The decision to limit the sample frame to full-time, unmarried, males and females who are Caucasian, native-born, and between the ages of 17 and 20 severely curtails the generalizability of the results.

The oversample of lower class students at Stanford may also limit the generalizability of the results and increase the selectivity of the sample; the lower class students who attended Stanford at the time the data were collected may not be typical of lower class college students in general.

Because two of the three colleges sampled represent an elite institutional context the generalizability of the results is limited and the selectivity of the sample greatly increased. Sixty-two percent of the urban students and 57 percent of the rural students were selected in accordance with the standards of high quality institutions and experienced their college career in rather elite contexts.

The sample is also distinctive in terms of its regional selectivity, since ninety-six percent of the students in the total sample were from the Pacific and Mountain divisions of the Western region.

Thus the findings of this research may be most applicable to Caucasian, native-born, unmarried adolescents from Pacific or Mountain states in the West and who attend rather elite universities with admissions criteria similar to those in effect during the period these data were collected (1958-1967).

Suggestions for Future Research

Future research using a broader sample base is needed to examine rural-urban differences in scholastic performance in more representative college contexts--e.g., community and state colleges. In addition, the effects of background variables on academic achievement may acquire more significance in view of the recent trend toward open admissions and "high risk" matriculants. While the present research focused on the rural-urban variable, there are many other individual, family, peer, and community factors which influence educational attainment.

Migrants versus Non-Migrants

Future study is also needed to explore the processual and/or selective effects of migration on educational outcomes. In dealing with the effect of community of residence on the educational aspirations and attainments of high school and college students, a majority of previous researches in the sociological literature neglected to distinguish between persons who had migraced from an urban place of birth to a rural place of residence and vice versa.

A major methodological concern of this study was to examine the effect of rural-urban background on scholastic performance in college unmitigated by migration effects. The exclusion of the migrants from the pooled sample may have affected the results of the study.

As Table 7 reveals, the exclusion of migrants did not influence the selectivity of the sample in regard to the eliteness of the institutions attended, but the percent attending each specific college does differ. Thus, due to the exclusion of migrants, the sample analyzed overemphasizes Stanford and underrepresents the Oregon Honors College and the University of Oregon.

Because the data did not specify the migrants' length of residence in the urban or rural areas, the migrant group could not be analyzed in terms of differences in the academic achievement between rural to urban migrants and urban to rural ones. Future research is needed to clarify this problem as well as to analyze differences that may exist between migrants and non-migrants.

FOOTNOTES

[1]For a more comprehensive discussion of the methodological procedures used in the Stanford Mobility Study and the Oregon Honors College Study see Anderson (1967), Ellis and Marquis (1964), Ellis and Lane (1966 and 1967), and Ellis, Parelius, and Parelius (1971).

[2]For a more detailed discussion of the methodological procedures used in the present research see Feller(1972).

[3]Excluded were 176 urban to rural migrants and 52 rural to urban ones.

[4]A weakness of the data on rural-urban background is that questions were asked only about students' place of birth and their place of residence at the time they entered college. No steps were taken in the original study to collect information on the size of the community in which they were actually reared or to determine whether that was the same as their present place of residence.

[5]See U. S. Bureau of the Census (1963).

[6]In this paper the term "rural" is used to refer to the "rural-small town" category.

[7]See Ellis, Lane, and Olesen (1963).

[8]See Feller(1972) for complete presentation of the tables for the bivariate analysis and multivariate analysis using separate as well as simultaneous controls on sex and class, and for the regression analysis.

[9]Original ranking procedure developed by the author for the present study.

[10]Kendall's coefficient of concordance (W) for the agreement between verbal scholastic aptitude test scores and quantitative scholastic aptitude test scores is .65 but is not statistically significant. (The obtained chi-square equals 13.30, and the critical chi-square equals 19.675 with 11 degrees of freedom at the .05 level.)

The coefficient of concordance for the agreement among high school grade point average, V.S.A.T. and Q.S.A.T. is .60 and is significant at the .05 level. (Chi-square equals 19.80, and the critical chi-square equals 19.675, with 11 degrees of freedom.)

The coefficient of concordance for the agreement between high school grade point average and the V.S.A.T. score is .90 and is significant at the .05 level. (The obtained chi-square equals 19.80 and the critical chi-square equals 19.675 with 11 degrees of freedom.)

[11]The coefficient of concordance for the indicators of college performance is .482 and is significant at the .01 level.

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TABLE 1. VALUES OF t (DIFFERENCE BETWEEN RURAL AND URBAN MEANS) FOR EACH INTERVAL DEPENDENT VARIABLE WITH (1) NO CONTROL, (2) CONTROL ON SEX, AND (3) CONTROL ON CLASS

Dependent Variable	No Control	Sex		Class		
		M	F	Upper	Middle	Lower
High School Grade Point Average	1.06	.89	.91	3.75[b]	- .98	- .74
Verbal Scholastic Aptitude Test	.09	.26	- .10	1.42	- .90	- .67
Quantitative Scholastic Aptitude Test	- .43	- .67	- .63	1.35	-1.25	- .69
College First-Year Grade Point Average	-1.20[a]	- .82	- .65	.99	-1.90[c]	- .47
College Cumulative Grade Point Average	-1.60	-1.59	- .44	.15	-1.93[d]	- .49

[a]Negative score indicates Urban means higher than rural ones.

[b]Significant at the .0005 level.

[c]Significant at the .05 level.

[d]Significant at the .05 level.

TABLE 2. VALUES OF CHI-SQUARE FOR CROSSTABULATIONS OF EACH NOMINAL DEPENDENT VARIABLE BY RURAL-URBAN BACKGROUND WITH (1) NO CONTROL, (2) CONTROL ON SEX, AND (3) CONTROL ON CLASS

Dependent Variable	(d.f.)	No Control[b]	Sex[c]		Class[d]		
			Male	Female	Upper	Middle	Lower
Academic Failure	(1)	.25	.03	.0001	.26	.66	.20
Drop Out	(1)	.05	.02	.89	.01	.01	.28
Graduation	(1)	1.80	4.36[a]	.0004	.36	.17	.70

[a]Significant at the .05 level. Contingency coefficient equals .107.

[b]Rural N equals 84; Urban N equals 645; Total N equals 729.

[c]Male N equals 376 (49 rural, 327 urban); Female N equals 353 (35 rural, 318 urban); Total N equals 729.

[d]Upper class N equals 316 (19 rural, 297 urban); Middle class N equals 357 (47 rural, 310 urban); Lower class N equals 56 (18 rural, 38 urban); Total N equals 729.

TABLE 3. VALUES OF t (DIFFERENCE BETWEEN RURAL AND URBAN MEANS) FOR EACH INTERVAL DEPENDENT VARIABLE BY SEX AND SOCIAL CLASS

Dependent Variable	Upper Class		Middle Class		Lower Class	
	Male	Female	Male	Female	Male	Female
High School Grade Point	2.99[a]	2.18[b]	-.71	-.53	-.38	-.68
Verbal S.A.T. Scores	.561	1.344	-.331	-.86	.188	.857
Quantitative S.A.T.	1.599	.39	-1.08	-.961	-.579	-.5
College 1-st year G.P.A.	.006	1.757[c]	-1.375	-1.184	-.062	-1.029
College Cumulative G.P.A.	-.741	1.162	-1.84[c]	-.815	-.05	-.95

[a]Significant at the .005 level.

[b]Significant at the .025 level.

[c]Significant at the .05 level.

Negative t score indicates that the Urban mean is higher than the rural one for the particular category.

TABLE 4. VALUES OF CHI-SQUARE FOR CROSSTABULATIONS OF EACH NOMINAL DEPENDENT VARIABLE BY RURAL-URBAN BACKGROUND, CONTROLLING SIMULTANEOUSLY FOR CLASS AND SEX

Dependent Variable[a]	Upper Class		Middle Class		Lower Class	
	Males	Females	Males	Females	Males	Females
Academic Failure	.106	.040	.267	.062	.017	p = .30[b]
Drop-Out	.004	.385	.069	.179	.029	p = .30
Graduation	.270	.005	3.162	1.157	.141	p = .31

[a]There is 1 degree of freedom for each dependent variable.

[b]Fisher's Exact Test.

TABLE 5. RANKS OF RELATIVE PERFORMANCE ON HIGH SCHOOL GRADE POINT AVERAGE AND VERBAL SCHOLASTIC APTITUDE TEST, MEAN RANK ON COLLEGE POTENTIAL, AND RANKS OF MEAN RANKS ON COLLEGE POTENTIAL

Rural-Urban Background		Upper Class		Middle Class		Lower Class	
		Male	Female	Male	Female	Male	Female
Rural	RANKS[a]	4, 5	2, 1	12, 11	9, 12	6, 3	3, 2
	MEAN RANKS	4.5	1.5	11.5	10.5	4.5	2.5
	RANKS OF MEAN RANKS	5	1	12	10.5	5	2
Urban	RANKS[a]	10, 8	8, 7	11, 10	7, 9	5, 4	1, 6
	MEAN RANKS	9	7.5	10.5	8	4.5	3.5
	RANKS OF MEAN RANKS	9	7	10.5	8	5	3

[a]The order of variables is as follows: high school grade point average and verbal scholastic aptitude test

TABLE 6. RANKS OF RELATIVE PERFORMANCE ON FIVE MEASURES OF COLLEGE PERFORMANCE, MEAN RANK ON COLLEGE PERFORMANCE, AND RANKS OF MEAN RANKS ON COLLEGE PERFORMANCE

Rural-Urban Background	RANK	Upper Class		Middle Class		Lower Class	
		Male	Female	Male	Female	Male	Female
Rural	RANKS[a]	8,10,8,2,8	6,4,9,5,6	11,11,5,7,11	5,6.5,4,10,7	2,5,7,1,3	4,1,2,6,2
	MEAN RANKS	8.7	3	10.6	6.5	6	7.9
	RANKS OF MEAN RANKS	10	1.5	12	6.5	4.5	9
Urban	RANKS[a]	7,6.5,12,8,10	1,2,2,9,1	12,12,6,11,12	10,8.5,2,3,9	3,8.5,10.5,4,4	9,3,10.5,12,5
	MEAN RANKS	7.2	6	9	6.5	3.7	3
	RANKS OF MEAN RANKS	8	4.5	11	6.5	3	1.5

[a]The order of variables is as follows: first-year grade point average, (lowest percent of) academic failure, (lowest percent of) drop outs, (highest percent of) graduates, and cumulative grade point average.

TABLE 7. PERCENTAGES OF STUDENTS BY ECOLOGICAL BACKGROUND AND BY COLLEGE ATTENDED

			"Pures"		
		Migrants	Urban	Rural	Total
Stanford	(%)	10%	25%	14%	20%
	(f)	(23)	(158)	(12)	(193)
Oregon Honors College	(%)	45%	37%	43%	39%
	(f)	(102)	(239)	(36)	(377)
University of Oregon	(%)	45%	38%	43%	41%
	(f)	(103)	(248)	(36)	(387)
Total	(%)	24%	67%	9%	100%
	(f)	(228)	(645)	(84)	(957)

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