

FARM RESIDENCE AND LEVELS OF EDUCATIONAL
AND OCCUPATIONAL ASPIRATION¹

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ABSTRACT

A hypothesis formulated by Lipset to explain the relatively inferior urban occupations achieved by farm persons was tested by comparing the occupational and educational aspirations of a rural and an urban sample. Among high-school Senior girls, neither educational nor occupational aspirations are significantly related to residence. Among boys, occupational aspiration is not, but educational aspiration is, associated with residential background and is not to be explained by intelligence. This indicates that the farm youth underestimates the importance of education in achieving an occupation. Lipset's hypothesis is only partially correct, and other hypotheses should be tested.

There is considerable evidence that farm migrants to the city have relatively low levels of occupational achievement. This was shown by an early study in Germany,² as well as by more recent studies in Stockholm, Sweden,³ and Oakland, California.⁴ In particular, the last-named research shows that the level of occupational achievement of farm-reared persons in a complex non-farm labor market is considerably lower than that reached by others. Lipset has tried to explain this, noting that rural people have relatively little access to colleges and

universities, that they go to relatively poor high schools, and that they encounter relatively few occupational alternatives. Consequently, he argues, the farm youth aspires to relatively low occupations and is not ambitious for the higher education he will need if he is to rise in urban society.

This explanation is as yet untested because there is no evidence to date that those reared on farms actually have lower educational or occupational aspirations than other people. The purpose of the present study is to present data testing Lipset's explanation.

The test of this proposition was made on a sample consisting only of persons who were completing their twelfth year of school. Those who had already committed themselves by entering college or employment could not be included, a requirement which eliminated all who were not full-time students. The test, of course, excluded those who were planning to go into farming, since non-farm occupations were the object of study. Because of differences in their vocational choices and educational aspirations, boys and girls were tested separately. The sample, moreover, was drawn from rich as well as poor farming areas and from large and highly industrialized cities as well as from smaller centers. Intelligence was controlled in testing relationships significant at the zero-order level because it has been found to vary consistently with occupational and educational aspiration⁵ and with

¹ This article reports the partial results of a larger study of talent loss directed by William H. Sewell and supported by the Rockefeller Foundation and the Agricultural Experiment Station of the University of Wisconsin. The writers acknowledge the aid of the Wisconsin Student Counseling Center and the Numerical Analysis Laboratory of the University of Wisconsin.

² Otto Ammon, *Die Gesellschaftsordnung und ihre natürlichen Grundlagen* (Jena: Gustav Fischer, 1895), p. 145; cited in Seymour Martin Lipset, "Social Mobility and Urbanization," *Rural Sociology*, XX (September-December, 1955), 220-28. Part of Ammon's data is presented in Pitirim Sorokin, *Social Mobility* (New York: Harper & Bros., 1927), p. 451, also pp. 414 ff.; and Pitirim A. Sorokin, Carle C. Zimmerman, and Charles C. Galpin, *A Systematic Source Book in Rural Sociology*, III (Minneapolis: University of Minnesota Press, 1932), 531.

³ Gunnar Boalt, "Social Mobility in Stockholm," *Transactions of the Second World Congress of Sociology*, II (London: International Sociological Association, 1954), 67-73.

⁴ Lipset, *op. cit.*

rural-urban residence.⁶ The subjects consisted of approximately five thousand Wisconsin high-school Seniors, a random sample of one-sixth of the Seniors enrolled in public and private high schools in the state in 1947-48.⁷ This is the most recent year for which adequate data are available.

The dependent variables are levels of educational and occupational aspiration. Educational aspiration was judged from the answers to questions as to whether the student planned to attend college, when, and which college. Those planning to attend a regular four-year college-level course of training were coded as having high educational aspirations.

⁶ Ralph F. Berdie, "Why Don't They Go to College?" *Personnel and Guidance Journal*, XXXI (March, 1953), 352-56; William Arthur Bradley, Jr., "Correlates of Vocational Preferences," *Genetic Psychology Monographs*, XXVIII (1943), 99-169; Harold P. Carter, *Vocational Interests and Job Orientation* ("Applied Psychology Monographs," Vol. II [Stanford University, Calif.: Stanford University Press, 1944]); Joseph A. Kahl, "Educational and Occupational Aspirations of 'Common Man' Boys," *Harvard Educational Review*, XXIII (Summer, 1953), 186-203; T. E. Livesay, "Test Intelligence and College Expectations of High School Seniors in Hawaii," *Journal of Educational Research*, XXXV (January, 1942), 334-37, and "Test Intelligence and Future Vocation of High School Seniors in Hawaii," *Journal of Applied Psychology*, XXV (1941), 679-86; J. Richard Porter, "Predicting Vocational Plans of High School Senior Boys," *Personnel and Guidance Journal*, XXXIII (December, 1954), 215-18; Joseph Stubbins, "The Relationship between level of Vocational Aspiration and Certain Personal Data," *Genetic Psychology Monographs*, XLI (1950), 327-408.

⁷ Sorokin, Zimmerman, and Galpin, *op. cit.*, pp. 266-93; Charles P. Loomis and J. Allan Beegle, *Rural Social Systems* (New York: Prentice-Hall, Inc., 1950), pp. 352-54; C. T. Philbad and C. L. Gregory, "Selective Aspects of Migration among Missouri High School Graduates," *American Sociological Review*, XIX (June, 1954), 314-24; and William H. Sewell and Bertram L. Ellenbogen, "Social Status and the Measured Intelligence of Small City and Rural Children," *American Sociological Review*, XVII (October, 1952), 612-16.

⁸ Data were taken from the records of the Wisconsin Student Counseling Service, which conducts the state's intelligence-testing program, and included the student's sex, intelligence quotient, residence, occupational choice, and plans regarding college.

Data for the second dependent variable—occupational aspiration—were taken from the answer to a question regarding intended vocation. The occupational choices of all persons planning to enter the non-farm labor market were assigned prestige ratings based upon the North-Hatt survey.⁸ Arbitrarily, only those choosing occupations with a prestige rating of 78 or more points on the North-Hatt Index were classified as having high occupational aspirations. This amounted to making the cutting point at the level of the public school teacher; those with high aspirations desired occupations with prestige at least equal to that of teachers.

Residence at the time the data were gathered is the independent variable. Only students residing in the open country whose fathers were farmers are classified as farm residents.

The control variable used was the student's intelligence quotient, taken from the Henmon-Nelson Test of Mental Maturity.⁹ The raw scores of this variable were ranked from highest to lowest and then divided into three groups of equal size for each test of the hypothesis.

The null form of the major hypothesis is as follows: *There are no significant differences in the levels of educational and occupational aspiration of Wisconsin high-school Seniors from farm and from non-farm backgrounds.* This was broken down into four specific null hypotheses for testing, two within each sex group.

Hypothesis 1.—There is no significant difference between the levels of educational aspiration of farm and non-farm girls.

Hypothesis 2.—There is no significant difference between the levels of non-farm occupational aspiration of farm and non-farm girls.

Hypothesis 3.—There is no significant difference between the levels of educational

⁸ National Opinion Research Center, "Jobs and Occupations: A Popular Evaluation," *Opinion News*, IX (September, 1947), 3-13.

⁹ V. A. C. Henmon and M. J. Nelson, *The Henmon-Nelson Test of Mental Ability* (Chicago: Houghton Mifflin Co., 1942).

aspiration of farm and non-farm boys.

Hypothesis 4.—There is no significant difference between the levels of non-farm occupational aspiration of farm and non-farm boys.

Each hypothesis was tested separately by means of one of four two-way tables. A chi-square value was computed to assess the relationship of aspiration level to residence.¹⁰

¹⁰ The standard chi-square formula, $\chi^2 = \sum (f_o - f_i)^2 / f_i$, is used for all bivariate tests of the null hypothesis. See, for example, G. Udny Yule and M. G. Kendall, *An Introduction to the Theory of Statistics* (13th ed., rev.; London: Charles Griffin & Co., 1948), pp. 413-33, esp. 416.

Finally, when the evidence permitted the rejection of any of the specific null hypotheses, a more rigorous test was made by adding the further control of intelligence.

As indicated by the data present in Table 1, the first null hypothesis cannot be rejected because $\chi^2_{0(1)} = 1.06 < \chi^2_{i(1)}.05 = 3.84$. Hence the level of educational aspiration of girls planning to enter the non-farm labor market is not associated with residence.

Table 2 shows that the second null hypothesis, too, cannot be rejected, for $\chi^2_{0(1)} = 1.12 < \chi^2_{i(1)}.05 = 3.84$. Thus level of occupational aspiration of girls planning to enter

TABLE 1

GIRLS' EDUCATIONAL ASPIRATION, BY RESIDENCE

EDUCATIONAL ASPIRATION	RESIDENCE		TOTAL	
	Farm	Non-farm	Per Cent	Number
High (college) (per cent).....	34	41	39	1,168
Low (non-college) (per cent).....	66	59	61	1,807
Total:				
Per cent.....	100	100	100
Number.....	660	2,315	...	2,975

$$\chi^2_{0(1)} = 1.06 < \chi^2_{i(1)}.05 = 3.84 .$$

TABLE 2

GIRLS' OCCUPATIONAL ASPIRATION, BY RESIDENCE

OCCUPATIONAL ASPIRATION*	RESIDENCE		TOTAL	
	Farm	Non-farm	Per Cent	Number
High (78 or more North-Hatt points) (per cent).....	31	28	29	674
Low (77 or less North-Hatt points) (per cent).....	69	72	71	1,679
Total:	100	100	100	
Per cent.....		
Number.....	501	1,852	...	2,353

* Excludes the undecided.

$$\chi^2_{0(1)} = 1.12 < \chi^2_{i(1)}.05 = 3.84 .$$

TABLE 3

BOYS' EDUCATIONAL ASPIRATION, BY RESIDENCE

EDUCATIONAL ASPIRATION	RESIDENCE		TOTAL	
	Farm	Non-farm	Per Cent	Number
High (college) (per cent).....	43	54	52	1,150
Low (non-college) (per cent).....	57	46	48	1,045
Total:				
Per cent.....	100	100	100
Number.....	328	1,867	...	2,195

$$\chi^2_{0(1)} = 12.80 > \chi^2_{i(1)}.05 = 3.84 .$$

the non-farm labor market is not associated with residence.

Data for the third null hypothesis are presented in Table 3. Since $\chi^2_{0(1)} = 12.80 > \chi^2_{(1).05} = 3.84$, the null hypothesis must be tentatively rejected. The percentages indicate that farm boys are apparently less likely to have high educational aspirations than are other boys. However, in a more complete

Non-farm boys tend to have higher educational aspirations than do farm boys. Thus it must be concluded that, independent of intelligence, farm residence may inhibit a boy's desire for higher education.

The fourth null hypothesis cannot be rejected (Table 5 presents the data used in making this test), for the total chi-square value does not come up to the criterion:

TABLE 4
PER CENT OF BOYS WITH HIGH EDUCATIONAL ASPIRATION,
BY RESIDENCE AND INTELLIGENCE

INTELLIGENCE	RESIDENCE		TOTAL	
	Farm	Non-farm	Per Cent	Number
Highest one-third (IQ: 114-39) (per cent).....	68	73	72	732
Middle one-third (IQ: 106-14) (per cent).....	42	54	52	732
Lowest one-third (IQ: 57-106) (per cent).....	24	36	33	731
Total:				
Per cent.....	43	54	52
Number.....	328	1,867	..	2,195

$$\chi^2_{0(3)} = 10.95 > \chi^2_{(3).05} = 7.82.$$

TABLE 5
BOYS' OCCUPATIONAL ASPIRATION, BY RESIDENCE

OCCUPATIONAL ASPIRATION*	RESIDENCE		TOTAL	
	Farm	Non-farm	Per Cent	Number
High (78 or more North-Hatt points) (per cent)...	44	40	41	616
Low (77 or less North-Hatt points) (per cent)...	56	60	59	904
Total:				
Per cent.....	100	100	100
Number.....	181	1,339	...	1,520

* Excludes the undecided.

$$\chi^2_{0(1)} = 1.15 < \chi^2_{(1).05} = 3.84.$$

test, intelligence was controlled while assessing the relationship of educational aspiration to residence. Table 4 shows the percentage having high aspirations in each intelligence-residence category. The null hypothesis was tested by computing a chi-square value of residence on educational aspiration in each of the three intelligence groups and then summing chi-squares and degrees of freedom.¹¹ Since $\chi^2_{0(3)} = 10.95 > \chi^2_{(3).05} = 7.82$, the null hypothesis must be rejected.

¹¹ *Ibid.*, p. 426; see also George W. Snedecor, *Statistical Methods* (4th ed.; Ames, Iowa: Iowa State College Press, 1946), pp. 188-89.

$\chi^2_{0(1)} = 1.15 < \chi^2_{(1).05} = 3.84$. It must be concluded, then, that among the boys in the sample occupational aspiration was not associated with residence.

These findings clearly imply that residential differences in educational and occupational aspiration do not explain differences in the eventual occupations of girls.¹² More-

¹² Strictly speaking, there is no clear evidence that farm females achieve lower occupations than city girls. Given the increasing importance of women in the labor market, the relative occupations of farm and non-farm women will have to be determined before a complete theory can be formulated.

over, among boys, occupational achievement cannot be predicted from information on residence. Boys who live on farms desire to enter high-level jobs with the same frequency as do males who do not. However, boys from the farm have less interest in a college education than do others. This indicates that farm boys are equally aware of the occupational alternatives but not equally aware of their educational requirements.

While these findings provide some support for Lipset's hypothesis, they limit its applicability to boys and then only to their educational aspirations. It is possible that aspects of farm life other than those hypothesized may influence the farm youth's occupational achievement in the city. For example, if a substantial proportion of the youth who plan to enter farming find their aspiration blocked in early adulthood, then they will be forced to seek work in the towns and cities. Many of these, had they known, might have trained for superior occupations.¹³ Other hypotheses, too, as yet untested, might be advanced to account for the relatively low occupations of rural persons in the city.

The findings of this study must be applied elsewhere with care because they are derived from a well-educated population. In societies with a large folk or peasant population, educational and occupational aspirations of farm people may differ sharply from those of others. It may also be that in certain other regions of the United States there are greater differences in urban and rural social structure than in Wisconsin and that these differences may be reflected in sharper differences in aspirations than those found there. Moreover, better measures of the variables may yield higher correlations. Nevertheless, the study shows that the variables in Lipset's proposition have limited applicability. This suggests the need for additional research, especially on rural persons less well educated than those studied here.

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¹³ Data on the influence of plans to go in for farming on plans for a college education will be presented elsewhere. See Archie O. Haller, "The Influence of Planning To Enter Farming on Plans To Attend College," *Rural Sociology* (forthcoming).