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Research Problems on the Occupational Achievement Levels of Farm-Reared People

Research has shown that farm-reared people have low levels of occupational achievement in the nonfarm world. Lipset has tried to explain this by pointing to the retarding effect of limited occupational and educational alternatives (supposedly characterizing rural life) on levels of occupational and educational aspiration. In turn, Lipset hypothesizes that levels of occupational and educational aspiration account for levels of occupational achievement. The present paper summarizes the researchable assumptions of Lipset's explanation, reviews data testing several aspects of the explanation, presents new data testing other aspects of the explanation, and presents a test of an alternative to one element of the explanation. The explanation is found to be only partially correct. It is valid in that levels of occupational achievement are correlated with levels of educational and occupational aspiration. It is invalid in that farm-nonfarm differences in levels of educational aspiration are not large enough to explain much of the variation in levels of occupational achievement, and it is invalid in that farm plans are found to explain all of the apparent relationship of farm residence to levels of occupational aspiration.

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RESEARCH has amply demonstrated that the men reared on farms tend to have less success on the job market than do those reared elsewhere. This was shown by Ammon in Berlin, Germany, in 1895,¹ by

*Journal Article No. 2147 of the Michigan State Agricultural Experiment Station. The writer wishes to express his gratitude to the school officials of Lenawee County and to his assistants, Arturo de Hoyos and Warren Sauer.

¹Otto Ammon, *Die Gesellschaftsordnung und Ihre Natürlichen Grundlagen* (Jena: Verlag von Gustav Fischer, 1895), p. 145. See also Pitirim A. Sorokin, *Social Mobility* (New York: Harper, 1927), pp. 144 ff. and 451; 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.

Beers and Heflin in Lexington, Kentucky, in 1945,² by Boalt in Stockholm, Sweden, in 1954,³ by Lipset in Oakland, California, in 1955,⁴ and most recently, by Freedman and Freedman in the United States as a whole in 1956.⁵ Farm areas have contributed a large proportion of the nonfarm population of the nation and of the world. Today about one-third of the nonfarm population of the United States were reared on farms.⁶ Doubtless this proportion will decrease with the continuing decrease in the farm population (now down to 12 per cent of the total population of the United States).⁷ Even so, basic research designed to account for, and thus control, the occupational success and failure of the farm-reared is important for two reasons: (1) The farm-reared probably will continue to constitute a numerically large segment of the American labor force, even though their proportionate contribution is lower than in previous decades. Research is needed to determine the factors that reduce the potential occupational achievement levels of these people, both to help in their personal adjustments and to reduce the talent loss in society. (2) The fact that the farm-reared in certain other countries also have had a relatively low degree of success on the job-market⁸ suggests that the problem may be widespread. In particular, societies hoping to change their economies from agriculture to industry may have a serious problem of changing the life orientation of their people so that effective industrial labor forces are developed. Basic research on the factors producing differential levels of achievement in the occupational structure of industrial societies such as the United States may have cross-cultural usefulness to the people of the so-called "underdeveloped areas."

PRESENT THEORY

To date, Lipset has provided the nearest approach to a theory accounting for the farm-reared person's low levels of occupational achievement.⁹ The general form of his explanation appears to be the social action theorist's proposition that differential human behavior in complex social systems is the result of differential motivation, which,

²Howard W. Beers and Catherine Heflin, *Rural People in the City* (Kentucky Agr. Expt. Sta. Bull. 478; Lexington, 1945).

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

⁴Seymour Martin Lipset, "Social Mobility and Urbanization," *Rural Sociology*, XX, 220-228.

⁵Ronald Freedman and Deborah Freedman, "Farm-Reared Elements in the Non-farm Population," *Rural Sociology*, XXI (1956), 50-61.

⁶*Ibid.*, p. 52.

⁷*Estimate of the Farm Population, April 1950 to 1957* Series Census-AMS [P-27], No. 24; Washington, D.C.: U.S. Department of Commerce, Bureau of the Census, 1957).

⁸Ammon, *op. cit.*; Boalt, *op. cit.*

⁹Lipset, *op. cit.*

in turn, is the result of the positions occupied by the actors during their preadult socialization period.¹⁰ His specific formulation is that certain elements of the structure of rural society—few immediately visible occupational roles, relatively poor elementary and secondary schools, and no university-level schools—limit the rural youth's awareness of the range of nonagricultural occupational alternatives and of the educational means for achieving the higher positions. The rural youth's limited awareness depresses his levels of educational and occupational aspiration. Low levels of educational and occupational aspiration thus generated result in low levels of occupation achievement.

PROBLEM AND METHODS

The purpose of this paper is to review the existing evidence bearing on the assumptions of Lipset's explanation, to present new data concerning some of these assumptions and alternative explanations, and to indicate areas where additional research is needed.

The assumptions not tested by Lipset are as follows: (1) the level of occupational achievement is positively correlated with the level of educational and occupational aspiration; (2) farm residence is negatively correlated with the level of educational aspiration; (3) farm residence is negatively correlated with the level of occupational aspiration; and (4) the same social and psychological factors are responsible for the low levels of achievement of farm-reared persons in both agricultural and industrial societies.

The data for this study are drawn from several reports, both published and unpublished. New data were collected during 1957 in Lenawee County, Michigan. The subjects are the 442 seventeen-year-old boys of the county who were born between July 1, 1939, and June 30, 1940, and who were in school during the testing period. Ideally, all of the age group in the county would have been tested. However, about 12 per cent who were no longer in school were omitted. Follow-up studies showed that about five out of six of the latter are sons of farmers. The consequent underrepresentation of farm boys may influence certain of the tests slightly but probably not appreciably. Lenawee County was selected as the site for three reasons: (1) It approaches the rural sociologist's ideal type of rurban community, having a medium sized city—Adrain, population about 20,000—as the geographical, economic, and administrative center, having satellite villages and towns, and having an agricultural hinterland. (2) It has an evenly divided farm, rural nonfarm, and urban population. (3) Its light industry and proximity to the Detroit-Toledo industrial area provide youth with a diversified set of occupational alternatives.

Level of occupational aspiration is one of the variables used. This is

¹⁰Talcott Parsons, Edward A. Shils, and James Olds, "Values, Motives, and Systems of Action," in Talcott Parsons and Edward A. Shils, eds., *Toward a General Theory of Action* (Cambridge, Mass.: Harvard University Press, 1951), pp. 53 ff.

taken from a forced-choice instrument developed to estimate the occupational prestige level desired by the subject while minimizing the non-prestige effects of his particular occupational choice.¹¹ It consists of eight questions regarding job preferences. Each question has ten ranked occupational alternatives scored from zero to nine inclusive, among which the respondent chooses one. The scores for rating the alternatives in each of the eight questions were drawn systematically from the entire range of the North-Hatt occupational prestige continuum.¹² For various reasons, ten of the original occupational titles were not included. Possible total scores range from zero to seventy-two points. The median score was 35. In the analysis, subjects falling above the median were classified as having high levels of occupational aspiration and those below the median were classified as having low levels of occupational aspiration. Subjects who scored 35 were arbitrarily assigned to one of the two categories. *Plans regarding farming* were taken from an open-ended question asking the respondent what occupation he plans to follow; respondents were classified either as *planning to farm* or *not planning to farm*. College plans were taken from a series of questions designed to tap the students' intentions regarding entrance into a regular four-year college or university; respondents were classified either as *planning to attend college* or *not planning to attend college*. *Farm-nonfarm residence* is the last of these variables; respondents whose fathers were at least part-time farmers and who reside on farms were classified as *farm residents* and all others were classified on *nonfarm residents*.

EMPIRICAL EVIDENCE

Data bearing on Lipset's explanation: The first assumption in Lipset's explanation is that level of occupational achievement is positively correlated with level of educational and occupational aspiration. This assumption is partially supported by longitudinal data correlating young adult levels of occupational achievement with adolescent levels of aspiration. The correlation of level of occupational achievement to level of educational aspiration is $r = +.17$. The correlation of level of occupational achievement to level of occupational aspiration is $r = +.46$.¹³

The second assumption in Lipset's explanation is that level of educational aspiration is negatively correlated with farm residence. In general, research tends to refute this assumption. One study, conducted on youth in the final year of Wisconsin's high schools, shows that farm-reared boys have slightly lower levels of educational aspiration than

¹¹A. O. Haller, *Occupational Aspiration Scale* (East Lansing: Michigan State, 1957).

¹²National Opinion Research Center, "Jobs and Occupations: A Popular Evaluation," *Opinion News*, IX (Sept., 1947), 3-13.

¹³Data compiled by William H. Sewell and A. O. Haller, on file at the University of Wisconsin. It is anticipated that the results of this study will be published in the near future.

do their nonfarm peers,¹⁴ but the observed differences are not large enough to account for the achievement differences noted by social scientists.¹⁵ Another study using the same sample shows that planning to farm (which is rare among nonfarm residents) sharply reduces levels of educational aspiration.¹⁶ This implies that the educational aspiration differences which have been noted between farm and nonfarm residents may be due to the belief that youth who plan to farm do not need college training, rather than to the supposed limited alternatives of rural society operationally summarized by the "farm resident" classification.

Lipset's third assumption is that level of occupational aspiration is negatively correlated with farm residence. This hypothesis was rejected for Wisconsin farm youth who do not plan to farm.¹⁷ However, this was not a thorough test because it failed to take into account the levels of occupational aspiration of youth who plan to farm. Data from the Lenawee County study provide a more complete test of this assumption. At first examination these data appear to support the notion that farm residence reduces levels of occupational aspiration. A chi-square test comparing the levels of occupational aspiration of farm and nonfarm residents shows the apparent relationship to be statistically significant.¹⁸ First appearances require critical evaluation. Planning to farm depresses levels of educational aspiration, and such plans might indirectly depress levels of occupational aspiration. Boys who decide not to go to college as a result of planning to farm may give low aspiration responses to the index of level of occupational aspiration because they recognize that the college training they have denied themselves would be needed for high-level nonfarm jobs. For this reason, farm plans were controlled while retesting the relationship of level of occupational aspiration to farm-nonfarm residence. In this instance, the chi-square test is not significant (computed by summing the chi-square values and degrees of freedom from the two component 2 x 2 tables).¹⁹ This means that the apparent relationship of low levels of occupational aspiration to farm residence is due to the presence in the farm group of a large

¹⁴A. O. Haller and W. H. Sewell, "Farm Residence and Levels of Educational and Occupational Aspiration," *American Journal of Sociology*, LXII (1957), 407-411.

¹⁵Ammon, *op. cit.*; Beers and Heflin, *op. cit.*; Boalt, *op. cit.*; Lipset, *op. cit.*

¹⁶A. O. Haller, "The Influence of Planning to Enter Farming on Plans to Attend College," *Rural Sociology* (1957), 137-141.

¹⁷Haller and Sewell, *op. cit.*

¹⁸The zero-order chi-square values are calculated according to the standard

formula, $X^2 = \sum \frac{(f_o - f_t)^2}{f_t}$. See G. Udny Yule and M. G. Kendall, *An Introduction to the Theory of Statistics* (13th ed.; London: Charles Griffin and Co., 1948), pp. 413-433, esp. 416.

¹⁹George W. Snedecor, *Statistical Methods* (4th ed.; Ames: Iowa State College Press, 1946), pp. 188-189; and Yule and Kendall, *op. cit.*, p. 426.

number who plan to farm. Thus Lipset's third assumption is not valid in Lenawee County because the low levels of occupational aspiration apparently associated with farm residence (and the social structure differences implied by it) are actually due to another variable, planning to farm.

Lipset's fourth assumption is that the same social and psychological factors are responsible for the low levels of occupational achievement of farm-reared people in both agricultural and industrial societies. The research summarized and reported above shows that even though occupational achievement level is correlated with educational and occupational aspiration levels, the other aspects of his hypothesis find little support among the relatively sophisticated farm people of Wisconsin and Lenawee County, Michigan. However, it may be that Lipset's explanation will be found to be valid in agricultural societies. If this prove to be true (and as yet there appears to be no published research demonstrating it), it would mean that the causes of low occupational achievement of the farm-reared differ according to the type of society. This suggests that societies in different stages of industrialization may need to use different tactics in their effort to make industrial workers out of agricultural people.

Thus in general, research supports the assumption that level of occupational achievement is positively correlated with level of educational and occupational aspiration but fails to support the contention that the limited educational and occupational alternatives supposedly characterizing farm areas produce low levels of educational and occupational aspiration. These conclusions are valid only for postwar rural life in the test areas of Wisconsin and Michigan and presumably other rural areas having a similar degree of world awareness. They are untested in genuinely agricultural societies.

A test of an alternative hypothesis: The aim of all theoretical research is the formulation and verification of explanatory hypotheses. Inasmuch as some of the main elements of Lipset's explanation have been rejected, it is desirable to try to replace them with verified alternatives. The source most readily available is to be found in the reasoning suggesting the variable which, when controlled, dictated the rejection of Lipset's explanation. This crucial variable is the plan to enter farming. In one Wisconsin study it was shown that planning to enter farming greatly reduces level of educational aspiration,²⁰ and in the Lenawee County study it was shown that planning to farm, which is characteristic of many more farmers than nonfarmers, accounts for practically all of the farm-nonfarm variation in level of occupational aspiration. In the latter instance, farm plans were controlled because, it was reasoned, youth who plan not to attend college as a result of a desire to farm may well recognize that they have thus blocked their chances of high achievement

²⁰A. O. Haller, "The Influence of Planning to Enter Farming on Plans to Attend College," *op. cit.*

in the nonfarm occupational world. If this be the case, they doubtless would indicate low levels of occupational aspiration when tested. In other words, if the boy who plans to farm believes college is not needed for farming, he will not plan to enter college; then when asked about nonfarm jobs, he would adjust his level of aspiration downwards so that it accords with his low level of educational aspiration. Thus, the low level of occupational aspiration could be due to a low level of educational aspiration.

This is itself a testable proposition which could serve as the alternative to Lipset's explanation. Verification of the hypothesis could provide the missing element of a complete explanation of the low levels of occupational achievement; rejection of the hypothesis will clear the way for the formulation and testing of new hypotheses. This may be tested by controlling college plans while testing the association of level of occupational aspiration to plans regarding farming. If the influence of planning to farming on level of occupational aspiration is indeed a function of college plans there should be no significant association of level of occupational aspiration to farm plans among those planning to attend college or among those not planning to attend college. Data testing this hypothesis are presented in Table 1. The null hypothesis must be rejected, for the chi-square value for each of the two sections

Table 1. Relation of plans regarding farming to level of occupational aspiration scores, by college plans

Level of occupational aspiration scores	Plans regarding farming	
	To farm	Not to farm
Planning to attend college		
High	8	150
Low	14	47
All	22	197
$X^2 = 15.57$ $df. = 1$ $P < .001$		
Not planning to attend college		
High	6	54
Low	34	121
All	40	175
$X^2 = 4.07$ $df. = 1$ $P < .05$		
$\Sigma X^2 = 19.64$ $df. = 2$ $P < .001$ (no answer = 8).		

of the table is significant beyond the .05 level. Thus, one alternative to Lipset's explanation is unacceptable. The depressing effect of farm plans on levels of occupational aspiration cannot be attributed to plans regarding college.

The factors underlying the influences of farm plans on levels of occupational aspiration are apparently more complex than present hypotheses suggest. The association of levels of occupational aspiration to farm plans is not simply due to the farm youth's recognition of the role of advanced education in high level occupational achievement. Additional research on personality and social situational factors will be needed before a valid theory explaining why farm plans depress levels of occupational aspiration can be formulated. In turn, such a theory in conjunction with the valid parts of Lipset's explanation may help account for the poor performance of farm people in the labor market.

But the society within which these hypotheses are being tested is not typically agricultural. Unlike many other nations, modern America is a great urban society in which agriculture stands in an interdependent relationship with other segments of the total social structure and in which farmers have access to most of the sources of knowledge available to the other segments of the society. This is especially true in the North, in which the test sites of Michigan and Wisconsin lie. We need to replicate these studies, to retest Lipset's hypothesis, and to formulate and test new hypotheses in peasant societies. A general theory of the adaptation of farm people to urban-industrial society will not be possible until this is done.