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# OCCUPATIONAL CHOICES OF WISCONSIN FARM BOYS<sup>1</sup>

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ABSTRACT Data taken from a one-third random sample of Wisconsin farm boys who were high school seniors in 1957 (N = 932) were used to test hypotheses concerning the existence and uniqueness of the influence of planning to go into farming, and the influence of several general factors on occupational choices. Occupational choice was classified as farm, blue-collar, lower white-collar, or professional and executive. The findings agree with most previous research that planning to farm depresses levels of concern with future education, and is associated with lower intelligence and with lower emphasis on achievement by significant others. The findings disagree with other studies in that blue-collar and lower white-collar choices appear to have about the same antecedents and consequences as does choosing to farm. Also, economic resources of significant others, and social context variables reflecting the general environment's lack of information sources concerning nonfarm occupational success, appear not to be associated with the occupational choices of farm boys.

Research projects conducted by several people in different areas of the country have led to a microtheory of the process whereby farm youths are differentially selected into the various levels of the nonfarm occupational prestige hierarchy.<sup>2</sup> Although we do not need to present the whole theory here, critical to it is the hypothesis that the plans the youths develop with respect to farming have a series of important consequences for their later achievements. Those boys who plan to go into farming supposedly see the educational requirements for success

<sup>1</sup> This is a revision of a paper presented at the annual meeting of the Rural Sociological Society in Chicago, August 1965. We wish to thank Vimal P. Shah and Alejandro Portes for their statistical help, and to acknowledge the services of the Wisconsin Computing Center. The research reported in this paper was financed by a grant from the National Institutes of Health, U. S. Public Health Service (M-6275), and the Research Committee of the University of Wisconsin Graduate School.

<sup>2</sup> The theory and the publications on which it is based are summarized in Archibald O. Haller, "Occupational Choice Behavior of Farm Boys," Journal of Cooperative Extension, 4 (Summer, 1966), pp. 93-102; and in Lee G. Burchinal, Marvin Taves and Archibald O. Haller, Career Choices of Rural Youth in a Changing Society, St. Paul: University of Minnesota, North Central Regional Research Bull. 412, 1962. in the nonfarm occupational world as irrelevant to themselves.<sup>3</sup> Hence, it is thought that they block themselves off from information that would be useful to them if the plan to farm were unfulfilled. Judging from the large difference between the number of boys who plan to farm and the number of farms that actually become available, this must be a substantial group.<sup>4</sup> The theory leaves open the question of the relative degree to which planning to farm may uniquely inhibit the search for such knowledge. It is not clear from the literature whether those planning to farm have even less awareness of the educational requirements for high nonfarm occupational achievement than those who plan to take blue-collar or lower level white-collar jobs, or whether, as Straus has suggested,<sup>5</sup> the three groups do not differ substantially in this respect.

The theory also includes speculations, buttressed by some evidence, concerning the origins of farm boys' occupational plans. Important among these is the hypothesis that farm boys will plan to farm (1) if personality factors make them relatively inaccessible to ideas that might open new alternatives to them;<sup>6</sup> (2) if the groups that are important to them do not expect them to be high achievers;<sup>7</sup> (3) if the persons on whom they depend can provide the resources required for entering farming (which, incidentally, could also be used to support high-level nonfarm achievement);<sup>8</sup> or (4) if the general environment in

<sup>8</sup> Lee G. Burchinal, "Who's Going to Farm?" Iowa Farm Science, 24 (April, 1960), pp. 12-15, and "Differences in Educational and Occupational Aspirations of Farm, Small-Town, and City Boys," Rural Sociology, 26 (June, 1961), pp. 107-121; A. O. Haller, "The Influence of Planning to Farm on Plans to Attend College," Rural Sociology, 22 (June, 1957), pp. 137-141, "Planning to Farm: A Social Psychological Interpretation," Social Forces, 37 (March, 1959), pp. 263-268, and "The Occupational Choice Process of Farm-Reared Youth in Urban-Industrial Society," Rural Sociology, 25 (September, 1960), pp. 321-333; Donald R. Kaldor et al., Occupational Plans of Iowa Farm Boys, Ames: Iowa State Agr. Exp. Sta., Bull. 508, 1962; William H. Sewell and Archibald O. Haller, "Educational and Occupational Perspectives of Farm and Rural Youth," in Lee G. Burchinal (Ed.), Rural Youth in Crisis: Facts, Myths, and Social Change, Washington, D. C.: U. S. Dept. of Health, Education and Welfare, 1965, pp. 149-169; Murray A. Straus, "Personal Characteristics and Functional Needs in the Choice of Farming as an Occupation," Rural Sociology, 21 (September-December, 1956), pp. 257-266, and "Societal Needs and Personality Characteristics in the Choice of Farm, Blue-Collar, and White-Collar Occupations by Farmers' Sons," Rural Sociology, 29 (December, 1964), pp. 408-425.

<sup>4</sup> Kaldor et al., op. cit.; Don Kanel, Opportunities for Beginning Farmers, Why Are They Limited?, Lincoln: Nebraska Agr. Exp. Sta., Bull. 452, 1960; Lester V. Manderscheid, "Farm Careers for Farm Youth," Michigan Farm Economics, East Lansing: Michigan State University, Dept. of Agr. Econ. and Coop. Ext. Serv., Publ. 244, 1963.

<sup>5</sup> Straus, "Societal Needs . . . ," op. cit.

<sup>6</sup> Straus, ibid.; and Haller, "The Occupational Choice Process . . . ," op. cit.

<sup>7</sup> Haller, *ibid.*, and "Planning to Farm . . . ," op. cit.

<sup>8</sup>Kaldor et al., op. cit.; Straus, "Personal Characteristics . . . ," op. cit., and "Societal Needs . . . ," op. cit.

which they reside is especially lacking in information relevant to highlevel achievement.<sup>9</sup> Again, the theory is ambiguous regarding whether such antecedents should account for differences among those who choose farming versus nonfarm occupations in general, or whether they should account for differences among those choosing farming and nonfarm occupations of varying levels in the stratification system. Those choosing farming are quite different on variables logically subsumed under these hypotheses than those choosing the higher prestige occupations, such as at the professional or executive level. It is not clear whether they should be different from those choosing occupations of lower prestige, such as those in the blue-collar or lower level whitecollar strata.

The exact wording of the hypotheses follows.

 $H_1$ : Planning to farm tends to depress levels of concern with the educational means for higher occupational achievement, while planning not to farm tends to raise them.

 $H_{z}$ : The more receptive he is to new information, the less likely a farm youth is to plan to farm.

 $H_{sa}$ : The greater the degree to which significant others expect high achievement, the less likely the farm youth is to plan to farm.

 $H_{sb}$ : The greater the resources significant others can provide, the more likely the farm youth is to plan to farm.

 $H_4$ : The greater the degree to which the general environment is saturated with information relevant to success in the nonfarm occupational world, the less likely the farm youth is to plan to farm.

#### METHOD

The objective of this paper is to present tests made of the above hypotheses concerning the consequences and antecedents of the plan regarding farming. Data for the tests are from questionnaire responses collected on a statewide one-third random sample of Wisconsin high school seniors in 1957. Our analysis is based on the information for the 932 farm boys in this sample.<sup>10</sup> The occupational choices of the

<sup>9</sup> Haller, "Occupational Choice Behavior . . .," op. cit.; Seymour Martin Lipset, "Social Mobility and Urbanization," Rural Sociology, 20 (September-December, 1955), pp. 220-228; William H. Sewell, "Community of Residence and College Plans," American Sociological Review, 29 (February, 1964), pp. 24-38; and William H. Sewell and Alan M. Orenstein, "Community of Residence and Occupational Choice," American Journal of Sociology, 70 (March, 1965), pp. 551-563.

<sup>10</sup> The sample is part of a larger body of data originally collected by J. Kenneth Little under a contract with the Office of Education (See his *A Statewide Inquiry into the Decisions of Youth About Education Beyond High School*, Madison: University of Wisconsin School of Education, 1958), which are presently being analyzed under the general direction of William H. Sewell. Other published research based on this sample includes William H. Sewell and J. Michael Armer,

Table 1. Summary of tests of hypotheses concerning presumed consequences (C) and antecedents (A) of farm (F), blue-collar (BC), lower white-collar (LWC), and professional or executive (PE) occupational choices of farm boys who were high school seniors in 1957

· · · · · · · · · · · · · · · · · · ·			Occuj F	pational o BC	hoice (p LWC	ercent) PE	Total	Ass 1/2 /L	ociation matrices		
Cor	nparison variables	Categories	N = 254	N = 357	N = 98	N = 223	N = 932	V (	BC	LŴC	PE
Hypot	hesis 1	·····	<u>-</u>								
Ĉ <sub>i</sub> :	College Plans‡	University or liberal arts college State or teachers' college	03 02	00 01	03 05	39 43	10 12	F BC LWC	ns 	ns ns	+.64 +.72 +.50
11		Vocational, trade, or business school No further education <i>Total</i>	05 90 100	14 85 100	16 76 100	7 11 100	10 68 100		·		
C <sub>2</sub> :	Willing to Borrow Money for College‡	Yes No Total	44 56 100	53 47 100	48 52 100	68 32 100	54 46 100	F BC LWC	ns 	ns ns	+.05 ns ns
C3:	Application for Scholarships‡	Applied for and received Applied for, had not received Had not applied <i>Total</i>	00 01 99 100	00 01 99 100	00 03 97 100	08 21 72 100	02 06 92 100	F BC LWC	ns 	ns ns –	+.16 +.18 +.08
C4:	Interest in High School Curriculum‡	Interesting No "especial influence" Uninteresting Total	26 50 23 100	30 49 22 <i>100</i>	41 40 19 100	83 14 03 <i>100</i>	43 40 17 100	F BC LWC	ns 	ns ns	+.32 +.27 +.19
C5:	Type of High School Curriculum‡	College preparatory Other Total	37 63 100	35 65 100	47 53 100	83 17 <i>100</i>	48 52 100	F BC LWC	ns 	ns ns –	+.22 +.21 +.13

\* p < .05;

†*p*<.01;

 $\pm p < .001$ . Differences in all tables without footnote references are "not significant."

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C <sub>6</sub> :	Perceived Value of	Quartile 4 (Highest)	10	11	21	50	21	F	ns	ns	+.39
	College (factor	Quartile 3	13	17	13	31	1 <b>9</b>	BC	-	ns	+.32
	quartiles; based	Quartile 2	30	29	24	17	26	LWC	-	-	+.32
	on ½ of all 1957	Quartile 1 (Lowest)	46	43	41	01	34				
	Wisconsin seniors)‡	Total	100	100	100	100	100				
Нуро	thesis 2										
A <sub>7</sub> :	Henmon-Nelson	Quartile 4 (Highest)	16	23	07	53	100 <sub>N = 189</sub>	F	ns	ns	+.22
	Intelligence Scores	Quartile 3	23	36	09	32	100 <sub>N=110</sub>	BC	-	ns	+.20
	(quartiles based on	Quartile 2	27	44	15	15	100 <sub>N=356</sub>	LWC	-	-	+.17
	1/3 of all 1957	Quartile 1 (Lowest)	37	45	10	7	100 N=197				
	Wisconsin seniors):	Total	27	38	11	24	100				
Нуро	thesis 3a										÷.
As:	Parents' Expecta-	Encouraged college	15	27	08	51	100 N-858	F	ns	ns	+.35
•	tions for College	Indifferent to college	34	46	13	07	100 - 514	BC	_	ns	+.28
	(subject's per-	Prohibited or dis-						LWC	-		+.27
	ception)t	couraged college	42	42	10	07	100x-60				
	1	Total	27	38	11	24	100				
A.:	Friends' Plans for	Will attend college	14	24	08	53	100 x - 100	F	ns	ns	+.14
	Post-High School	Will not attend or		-1		÷	B_100	BC	_	ns	+.12
	Education (sub-	does not know	30	42	11	17	100	LWC	-	_	+.07
	iect's perception)1	Total	27	38	11	24	100				
	J L/+							· .			
A <sub>10</sub> :	Father's Education	Completed college	24	24	18	35	$100_{N \pm 17}$	F	ns	ns	ns
		Some college	31	21	07	41	100 <sub>N=89</sub>	BC	-	ns	ns
		Completed high school	21	38	07	- 33	100 <sub>N=146</sub>	LWC	-	-	ns
		Some high school	23	37	13	28	$100_{N=187}$				
		Less than high school	30	40	11	20	100 <sub>N=603</sub>			. *	
		Total	27	38	11	24	s. 100				•

. Table 1. (Continued)

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Comparison variables	Categories	Occupational choice (percent) F BC LWC PE			Total	Association matrice			ces licted)		
*		N = 254	N = 357	N = 98	N = 223	- <i>I</i> N = 992	•	BC	LŴC	PE	
A <sub>11</sub> : Mother's	Completed college	21	31	06	43	100,8=7#	F	ns	ns	ns	
Education	Some college	24	24	06	47	100 8 = 34	BC	-	ns	ns	
	Completed high school	27	40	08	25	100 <sub>N=#19</sub>	LWC	-	-	ns	
· -	Some high school	25	44	08	22	100 <sub>N=156</sub>					
•	Less than high school	29	38	14	19	100 <sub>N=459</sub>					
	Total	27	38	11 -	24						
A <sub>12</sub> : Discussion of	Much	26	30	11	32	100 <sub>N=53</sub>	F	ns	ns	ns	
Future Plans	Some	27	45	11	18	$100_{N=496}$	BC	-	ns	ns	
With Parentst	None	38	38	02	23	100 <sub>N=585</sub>	LWC	-	-	ns	
	Total	27	38	11	24						
A <sub>13</sub> : Influence of Parents	Much	28	33	11	27	100 <sub>N=219</sub>	F	ns	ns	ns	
on Future Occupa-	Some	26	38	11	25	100 <sub>N=573</sub>	BC	-	ns	ns	
tional Plans (sub-	None	30	49	07	14	100 <sub>N=140</sub>	LWC	-		ns	
ject's perception)*	Total	27	38	11	24	+					
Hypothesis 3b											
A <sub>11</sub> : Parents' Ability	Could easily provide						F	ns	ns	ns	
to Provide Support	support	40	29	10	21	100 <sub>N=94</sub>	BC	_	ns	+.07	
for Higher Educa-	Could provide support						LWC	-	<u></u>	ns	
tion (subject's	"with sacrifice"	25	31	10	33	$100_{N=107}$					
perception)‡	Could not provide support	26	47	11	16	100 <sub>N=431</sub>					
	Total	27	38	11	24	100					
A <sub>16</sub> : Amount of Parental	All expenses	39	33	06	22	100 <sub>N=100</sub>	·F	ns	ns	.07	
Support for Higher	\$1,000 to \$1,500	38	23	17	22	100 <sub>N=65</sub>	BC		ns	+.06	
Education for	\$500 to \$1,000	26	33	10	31	100 <sub>N=854</sub>	LWC	-	_	ns	
"Next Year"	Less than \$500	19	40	11	30	100 N=280					
(subject's report)‡	None	-30	49	11	11	100 <sub>N=135</sub>					
	Total	27	38	11	24	100					

Table 1. (Continued)

A16: 1	Parents' Economic	Quartile 4 (Highest)	38	30	10	22	100 <sub>N=202</sub>	F	ns	ns	.06
5	Status (factor quar-	Quartile 3	27	25	11	37	100N=166	BC	-	ns	.07
1	tiles; based on $\frac{1}{18}$	Quartile 2	<b>20</b>	43	11	26	100 <sub>N=\$60</sub>	LWC	_	-	ns
•	of all 1957 Wis-	Quartile 1 (Lowest)	30	50	10	11	100 <sub>N=101</sub>				
. (	consin seniors)‡	Total	27	38	11	24					
Hypoth	nesis 4										
A,,: 1	Level of Living	Sextile 6 (Highest)	37	30	09	24	100 <sub>N=149</sub>	F	ns	ns	ns
(	of County of	Sextile 5	29	35	10	26	100 <sub>N=186</sub>	BC	-	ns	ns
1	Residence	Sextile 4	28	38	10	24	100 N = 177	LWC	-		ns
(	(sextiles; based	Sextile 3	27	39	10	24	100 <sub>N=157</sub>				
(	on ½ of all	Sextile 2	23	4I	12	24	100 <sub>N = 186</sub>				
3	1957 Wisconsin	Sextile 1 (Lowest)	24	44	10	22	100 2 = 144				
5	seniors)	(No data)	(00)	(54)	(15)	(31)	$(100_{N=10})$				
		Total	27	38	11	24					
A <sub>18</sub> : 1	Level of	50,000 or more in									
1	Urbanization	largest city	36	30	14	21	$100_{N=73}$	F	ns	<b>ns</b> :	ns
c	of County of	25,000-49,999 in largest city	25	41	09	24	100 <sub>N=169</sub>	BC	· -	ns	<b>ns</b>
]	Residence	10,000-24,999 in largest city	16	44	10	30	100 <sub>N=77</sub>	LWC	_	-	ns
		5,000-9,999 in largest city	28	38	13	21	100 N=11				
1.1		2,500-4,999 in largest city	29	38	08	25	100 N=204				
		2,499 or less in					•				
		largest city	28	37	10	25	100				
		Total	27	38	11	24					
A <sub>19</sub> : 1	Distance Between	15 miles or less	30	38	11	20	100 <sub>N-665</sub>				
]	High School and	More than 15 miles	26	38	10	25	100	F	ns	ns	ns
t	the Nearest College	Total	27	38	11	24		BC		 TIS	ns
	or University		-,		••	2.		LWC	_	_	ns

Table 1. (Continued)

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	7	able 1.	(Conti	nued)						
	· ·	Occuj F	pational o BC	hoice (p LWC	ercent) PE	Total		ociatio	n matric	es
Comparison variables	Categories	N = 254	N = 357	$N \approx 98$	N = 223	N = 932	<i>,</i> ().	BC	LŴC	PE
A <sub>20</sub> : Mean Socioeco-	Quartile 4 (Highest)	29	36	10	25	100 <sub>N = 165</sub>		-		
nomic Status of the	Quartile 3	30	39	07	23	100 N=200	F	ns	ns	ns
Families of the	Quartile 2	30	37	11	22	100 <sub>N=202</sub>	BC		ns	ns
Subject's Classmates	Quartile I (Lowest)	23	40	12	25	100 <sub>N=458</sub>	LWC	··••.	-	ns
(quartiles; based on	Total	27	38	11	24					
<sup>1</sup> / <sub>3</sub> sample of all										
Wisconsin seniors)										
A <sub>21</sub> : Percentage of Sub-	18-99 percent (Highest)	33	33	10	24	100 <sub>N=115</sub>				
ject's Senior Class-	13-17 percent	29	38	08	26	100 <sub>N=176</sub>	F	ns	ns	ns
mates' Fathers Who	06-12 percent	25	40	09	26	100 <sub>N=225</sub>	BC		ns	ns
Have Attended	00-05 percent (Lowest)	26	39	12	22	100 <sub>N=126</sub>	LWC	_		ns .
College One Year	Total	27	38	11	24					
or More	· · ·									
A22: Percentage of Sub-	13-99 percent (Highest)	35	36	06	23	100 <sub>N=117</sub>				
ject's Senior Class-	10-12 percent	26	41	15	18	100 8 = 100	F	ns	ns	ns
mates' Fathers	04-09 percent	26	36	11	27	100 N-248	BC	_	ns	ns
Employed in Pro-	00-03 percent (Lowest)	26	39	10	24	100 - 507	LWC	_	_	ns
fessional or Exec- utive Positions	Total	27	38	, <i>11</i>	24					

\* p < .05;  $\ddagger p < .01$ ;  $\ddagger p < .001$ . Differences in all tables without footnote references are "not significant."

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farm boys were classified into four categories: farming (N = 254), bluecollar (N = 357), lower level white-collar (N = 98), and professional and executive (N = 223).<sup>11</sup> We expected this breakdown to show whether those planning to farm were uniquely disinterested in the educational means for achievement, and uniquely lacking the psychological and social conditions antecedent to high-level choices.

### Variables

General descriptive names for each of the 22 variables used to test the hypotheses are presented below. The names of the categories of each are given in Table 1. Variables labeled C presumably measure consequences of occupational plans, and those labeled A presumably measure antecedents of occupational plans. The 22 variables were numbered consecutively  $C_1-C_6$  and  $A_7-A_{22}$ . Six measures of concern with the educational means for higher occupational achievement were used for testing Hypothesis  $H_x$ . These included  $C_1$ , the youth's plans regarding college;  $C_2$ , his willingness to borrow money for college expenses;  $C_3$ , his application for and receipt of scholarships;  $C_4$ , the youth's report of interest in his high school curriculum;  $C_5$ , the type (college preparatory or other) of high school curriculum taken; and  $C_6$ , factor scores indexing his perception of the value of college.

One measure of receptivity to new information was used to test Hypothesis  $H_s$ . This is  $A_7$ , the youth's score on the Henmon-Nelson intelligence test.<sup>12</sup> Hypothesis  $H_{3a}$  deals with the expectations that significant others have for the youth's high level of achievement. The most direct ways of measuring this factor are to determine the persons who are of significance in this area to each youth, and to measure their expectations for his achievement. None of the six measures conform to this ideal, but each may be used as an indirect measure of the variable. Variables  $A_8$  through  $A_{13}$  are presented in order of their relative approximation to the ideal. These are:  $A_8$ , the youth's report of the expectations that his parents have for his college education;  $A_{9}$ , his report of his friends' plans for college;  $A_{10}$ , his father's education;  $A_{11}$ , his mother's education;  $A_{12}$ , his report of the influence that his

"Neighborhood Context and College Plans," American Sociological Review, 31 (April, 1966), pp. 159-168; Sewell, op. cit.; Sewell and Orenstein, op. cit.; and Sewell and Haller, loc. cit.

<sup>11</sup> Because this sample included only high school seniors, farm boys who had dropped out of school were missed. This is a serious limitation but less so than it would be in most other states because, in 1960, 85 percent of Wisconsin farm boys, aged 16-17, were enrolled in school. This computation is based on data from Table 101, Census of Population, 1960, Detailed Characteristics: Wisconsin, Final Report P ((1)-51), Washington, D. C.: Govt. Printing Office, 1962, pp. 312-320.

<sup>12</sup> V. A. C. Henmon and M. J. Nelson, *The Henmon-Nelson Test of Mental Ability*, Boston: Houghton Mifflin Company, 1942.

parents have had upon his future plans. Hypothesis  $H_{sh}$  is concerned with the financial resources that significant others may be able to provide. There are three of these:  $A_{14}$ , the youth's report of the ease with which his parents could provide support for higher education;  $A_{15}$ , the amount in dollars the youth reports that his parents could provide for his higher education for the next year; and A<sub>16</sub>, a factor-weighted index of his family's economic status, based on data from one-third of all seniors in the state in 1957 (not just farm boys), and including A14 and A<sub>15</sub> as well as the youth's estimate of his family's wealth. Hypothesis  $H_{t}$  refers to the effects on choosing to farm of the degree to which the youth's general environment is saturated with information relevant to higher nonfarm occupational achievement. (The term "general environment" is more inclusive than the cliques or families to which the youth belongs. The latter are treated in  $H_{sa}$  as "significant others.") The indexes assume that general environments that are of higher status, more urbanized, or physically or socially closer to a college, are more saturated with such information. The six variables indirectly measuring information saturation are A17, level of living scores for the county where the youth resides;<sup>13</sup> A<sub>18</sub>, level of urbanization of the county (indexed by size of the largest city);  $A_{19}$ , the distance between the youth's high school and the nearest four-year college; A20, the mean socioeconomic status of the families of his senior classmates;  $A_{21}$ , the percentage of the classmates' fathers who attended one year or more of college; and A22, the percentage of the youth's classmates whose fathers are in professional or executive positions.

# **Statistics**

Because the sample size was quite large (932), statistical devices yielding statements of the probability of no association were sensitive to differences too small to consider substantively important. Nonetheless, chi-square values were calculated for each of the 22 subtables and the resulting probability values are provided in Table 1. We used a somewhat different criterion, as follows. Those choosing to farm were compared separately with *each* of the others: those choosing blue-collar, lower white-collar, and professional and executive occupations. This was done to permit the detection of unique influences of planning to farm. The decision-making device used here is a measure of degree of association,  $V^{2, 14}$  calculated for each pair of occupational

<sup>13</sup> Margaret J. Hagood, Farm Operator Family Level of Living Indexes for Counties of the United States, 1930, 1940, 1945, 1950, Washington, D. C.: Bureau of Agricultural Economics, December, 1951.

<sup>&</sup>lt;sup>14</sup>  $V^2 = \frac{X^2}{N \min(r-1,c-1)} = \frac{V^2}{\min(r-1,c-1)}$ . See Hubert M. Blalock, Jr., Social Statistics, New York: McGraw-Hill Book Co., 1960, p. 230. In this case [Min (r-1,c-1)]=1, hence  $V^2 = \phi^2 = x^2/N$ , and  $V^2$  may be considered to be a rough approximation to  $r^2$ .

choices (farm by blue-collar, farm by lower white-collar, . . ., lower white-collar by professional and executive) by each of the 22 comparison variables. A  $V^2$  value is presented only if  $V^2 \ge .05$ . Given the large subsample sizes, the chi-square value on which  $V^2$  is based is somewhat larger than that needed for  $P \le .001$  by conventional standards. Thus, we can be reasonably certain that the  $V^2$  values reported herein are based upon reliable differences, and that those unreported are probably not important even though they may at times be reliable.

#### RESULTS

#### $Hypothesis H_1$

The results are presented in Table 1. Subtables C<sub>1</sub> to C<sub>6</sub> refer to Hypothesis  $H_i$ : planning to farm tends to depress levels of concern with the educational means for higher occupational achievement, but planning not to farm tends to raise them. The comparison of variable C1, college plans, with occupational choice provided the first of the six tests of  $H_1$ . The subtable referring to  $C_1$  shows that within the categories of those choosing to farm, choosing blue-collar occupations, or choosing lower white-collar occupations, there were almost no farm boys who planned to go to any type of college. The relevant percentages range from zero to five percent. In contrast, 39 percent of the farm boys choosing professional and executive occupations planned to attend universities or liberal arts colleges, and 43 percent planned to attend state or teachers' colleges. Finally, 90 percent of the boys choosing farming, 85 percent choosing blue-collar occupations, and 76 percent choosing lower white-collar occupations did not plan to obtain any additional formal education; while only 11 percent of those interested in professional and executive occupations did not plan to obtain further education beyond high school. The overall percentage trends are borne out by the association matrix referring to  $C_1$ . The only  $V^2$ values greater than our cutting point ( $V^2 = \pm .05$ ) are those comparing boys choosing to farm, or boys choosing blue-collar occupations, or boys choosing lower white-collar occupations, with those choosing professional and executive occupations. The respective  $V^2$  values are +.64, +.72, and +.50. The results are consistent with the hypothesis as worded, yet they show that there is no reason to assume that those choosing farming differed in this respect from those choosing bluecollar occupations or lower white-collar occupations.

The subtable for variable  $C_2$  presents another test of the hypothesis. It concerns the youth's willingness to borrow money for college compared again with the occupational choice variable. The percentage differences are not as great as in the previous subtable and, on the whole, seem to indicate that almost half the boys, whatever their occupational choice, claimed to be willing to borrow money for college.

About two-thirds of those choosing professional and executive occupations reported that they were so inclined. The association matrix shows a slight degree of support for the hypothesis in that only the comparison between those choosing farming and those choosing professional and executive occupations is large enough to be reported here, yet it is only  $\pm .05$ .

The subtable concerned with  $C_3$ , application for scholarships, provides the next test of the hypothesis. Almost none of those choosing farming, blue-collar occupations, or lower white-collar occupations had made such an application, whereas 29 percent of those choosing professional and executive occupations had done so. The association matrix shows a positive association between each of the three lower occupational choices and the professional and executive level in relation to scholarship applications—which, of course, is what one would expect from the percentage data. Thus, as in the first subtable, the data tend to support  $H_1$ , and to show that the influence of choosing to farm is just about the same as choosing a blue-collar occupation or a lower white-collar occupation.

Variable  $C_4$  concerns the youth's interest in his high school curriculum. Here again, the percentages appear to show very little difference among those choosing farming, blue-collar, and lower white-collar occupations, and a fairly substantial difference between all those three and the youths choosing professional and executive occupations. For example, for the first three groups the percentages indicating that the curriculum was "uninteresting" are 23, 22, and 19 percent respectively, but only 3 percent for the last group. Again the inference drawn from the percentages is borne out by the  $V^2$  matrix:  $V^2$  values larger than  $\pm$ .05 are found only for the comparisons of the three lower occupational choices with the professional and executive category. These range from  $\pm$ .32 down to  $\pm$ .19. The comparisons among the lower three occupations were not large enough to be reported.

Variable  $C_5$  pertains to the curriculum the youths took in high school, classified as college preparatory or other. There is almost no percentage difference between those who chose farming and those who chose blue-collar occupations with regard to college preparatory curricula. The percentages are 37 and 35, respectively. Forty-seven percent of the lower white-collar choosers selected college preparatory, and 83 percent of the professional and executive choosers did so. The table shows that precisely the same trends occur regarding the  $V^2$ values for college preparatory curricula as for most of the preceding subtables. There are no statistically significant differences among those choosing farming, blue-collar, or lower white-collar occupations, but there is such a difference between each of these groups and those choosing professional and executive occupations. The  $V^2$  values range from +.22 to +.13.

The final test of the hypothesis is presented in the subtable referring to C<sub>6</sub>, a factor-weighted index of the perceived value of college, classified into quartiles (which in turn are based on one-third of all of the 1957 Wisconsin seniors including those who are nonfarm). The same trends are evident in this subtable. There appears to be little difference among the lower three occupational choices and a substantial difference between all three of these and the professional and executive level. For example, only 10 percent of the farm, 11 percent of the blue-collar, and 21 percent of the lower white-collar choosers had scores on the factor that placed them in the top quartile, whereas 50 percent of those who chose professional and executive occupations fell in the top quartile. And again, at the bottom of the subtable, the lower three occupational choices are considerably overrepresented in the lower quartile (46 percent for farm, 43 percent for blue-collar, and 41 percent for lower white-collar), while only one percent of the professional and executive choosers are found in that quartile. These trends are borne out by the association matrix. It shows that the  $V^2$  values among the lower three occupational choices are too small to report. On the other hand, the  $V^2$  values for each of those as compared to professional and executive choices range from +.39 down to +.32.

Thus, in six different subtables there is evidence that compared to choosing professional and executive occupations, those choosing farming are indeed less concerned with the educational means for occupational achievement. Yet there is almost no dependable evidence that those farm youths choosing farming are substantially different in this regard from farm youths choosing blue-collar or lower white-collar occupations. In other words, choosing to farm does not uniquely tend to depress levels of concern with the educational means for higher occupational achievement, but choosing a professional or executive career raises levels of concern with higher education.

#### $Hypothesis H_2$

The second hypothesis, concerning potential receptivity to new information, was tested by  $A_7$ , Henmon-Nelson intelligence test scores. In this and succeeding subtables we were interested in the presumed influence of an antecedent variable on the occupational choice variable; hence the percentages were calculated row-wise rather than column-wise as in the previous tables. Again, the sharpest differences are between the professional and executive group and all others: 53 percent of the highest intelligence category chose professional and executive occupations, while the respective percentages vary from 7 to 23 among the lower three occupational choices. The rest of the percentage data are consistent with the above trend although the differences are not quite so striking. The  $V^2$  information from the association matrix shows no significant differences among the lower three

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occupational choices. However, each of them differs significantly from the executive and professional choice group. The respective  $V^2$  values are farm versus professional and executive, +.22; blue-collar versus professional and executive, +.20; lower white-collar versus professional and executive; +.17. Thus paralleling  $H_1$ , we concluded that farm boys who, by virtue of low measured intelligence are less receptive to new information, tend not to choose professional or executive level occupations. However, choosing to farm is not uniquely influenced by low receptivity to new information as indexed by this variable.

# Hypotheses $H_{3a}$ and $H_{3b}$

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Hypothesis  $H_{sa}$  concerns the influence of significant others' expectations on occupational choice. The first such variable is  $A_8$ , the parents' expectations regarding college for their son. The subtable shows essentially the same pattern we observed several times before; that is, if parents encourage college attendance, a boy tends to choose a professional or an executive level occupation, but if parents are indifferent to college attendance or prohibit or discourage it, their son tends to choose one of the lower three occupations. The association matrix confirms the presumption of no difference among farm, blue-collar, and lower white-collar occupational choices regarding this variable, but at the same time shows that each of these differs substantially from the professional and executive choices. Farm versus professional and executive is  $V^2 = +.35$ ; blue-collar versus professional and executive is  $V^2 = +.28$ ; and lower white-collar versus professional and executive is  $V^2 = +.27$ .

Variable  $A_9$  provided a somewhat less direct way of testing the hypothesis: it concerns the youth's friends' college plans. It is less direct because the friends' plans are for their own behavior regarding school, not for that of the youth himself. The percentage data are consistent with the previous information. If a youth reported that most of his friends would attend college, he tended (53 percent of the time) to choose a professional or executive level occupation. If he reported that his friends would not attend college or if he did not know, he was much more likely to choose one of the three lower occupations. Again this is borne out by the  $V^2$  matrix which shows no differences that are statistically significant among the lower three occupational choices. However,  $V^2$  values of +.14, +.12, and +.07 are observed between those choosing professional and executive occupations, or choosing lower white-collar occupations.

Variable  $A_{10}$ , father's education, was an even less direct measure of expectations regarding high level achievement. Here it was assumed that the father's education controls the expectations he has for his son; hence, should be highly correlated with them. The subtable seems to indicate a slight tendency for fathers of the boys in the three lower

occupational choice categories to have lower levels of education, whereas fathers of the professional and executive choosers tend to have higher educational levels. However, the  $V^2$  matrix shows that none of the pair-wise comparisons produces differences large enough to come up to the standard used throughout this paper. Therefore, we concluded that the data from this subtable tend to reject Hypothesis  $H_{sa}$ . Similar tendencies are seen regarding the influence of mother's education,  $A_{11}$ , also treated as an indirect measure of parents' expectations. There appears to be a slight tendency for mothers of the three lower occupational choice categories to be concentrated in the lower levels of education, while the mothers of the professional and executive category tend slightly to be concentrated in the higher levels of education. But because the pair-wise comparisons are all below the criterion of  $V^2 \ge \pm .05$ , we concluded that the data do not support Hypothesis  $H_{sa}$ .

Variable  $A_{12}$  is the amount of discussion of future plans that the youth had with his parents. Despite some tendencies seemingly paralleling those we have seen before in almost all the subtables, the pairwise tests indicate no significant differences. Thus, these data too failed to support  $H_{sa}$ . Variable  $A_{18}$  provided a final test of the hypothesis. It concerns the amount of influence that the parents have had on the youth's future occupational plans, as he perceives it. There are no trends readily apparent in the percentages, and the pair-wise tests in the  $V^2$  matrices are all nonsignificant; hence, the data tend to reject the hypothesis.

In general, we concluded that Hypothesis  $H_{3a}$  has partial support. That is, the two most direct measures of the expectations of significant others,  $A_8$  and  $A_9$ , show that those choosing farming do in fact come from groups having a low level of expectations. However, as in  $H_1$ and  $H_2$ , there is no evidence that those choosing farming are uniquely influenced by the low expectations of significant others. Rather, the achievement expectations that significant others have for the youth who chooses farming are not substantially different from the expectations for one who chooses a blue-collar occupation or a lower whitecollar occupation.

Hypothesis  $H_{sb}$  concerns the resources significant others can provide, hypothesizing that the greater the financial resources the parents have at their disposal, the more likely the farm boy is to plan to farm. Variable  $A_{14}$  is the parents' ability to provide support for higher education, as seen by the youth. The percentages in the subtable show no clear trend. The  $V^2$  matrix tends on the whole to support this observation. The only reliable comparison is between the blue-collar and the professional and executive categories, and this one is very low (+.07). Hence, the data tend to reject the hypothesis. Variable  $A_{15}$  is the dollar support the youth believes his parents can provide for his higher education for the next year. The percentage data appear to be

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inconsistent with the hypothesis. There may be a tendency for the farm group to be overrepresented in the All Expenses category and in the No Support category. In any case, the  $V^2$  matrix shows non-reliable or very small  $V^2$  values among the pair-wise occupational choice categories. The data are thus contrary to the hypothesis.

Variable  $A_{16}$  is the parents' economic status factor quartile scores. The percentage subtable shows that if there are any associations, they tend to be curvilinear—the farming and the blue-collar job choosers are relatively overrepresented in both the high and low economic factor score categories. In any case, even these few  $V^2$  values, though reliable by our criteria, are very small (.06 and .07). Regarding this hypothesis, the general conclusion we drew was that financial resources, at least as perceived by the youth, had little to do with the farm, blue-collar, lower white-collar, or professional and executive choices of the farm youth in our sample. Thus, the hypothesis may be rejected.

#### Hypothesis $H_{k}$

Hypothesis  $H_{i}$  concerns the influence of the general environment on occupational choice. The results of the six tests of the hypothesis were uniformly negative. Our data provide no evidence that any of the following is associated with the occupational choice variable:  $A_{17}$ , level of living of the county of residence; A<sub>18</sub>, level of urbanization of the county of residence; A<sub>18</sub>, the distance between the high school community and the nearest college or university; A<sub>20</sub>, the mean socioeconomic status of the families of the subject's senior classmates; A21, the percentage of the subject's senior classmates' fathers who attended college one year or more; and last  $A_{22}$ , the percentage of the subject's senior classmates' fathers who are employed in professional or executive positions. None of the pair-wise comparisons are significant by our criterion. Moreover, there is no apparent trend in any of the percentage tables. Finally, even the chi-square values-which, given the large sample size, would be sensitive to very small differences-are uniformly below minimal levels required for statistical significance. The conclusion drawn is that there is absolutely no evidence that farm youth who reside or interact in general environments, which (because of a high level of socioeconomic or cultural status, a high degree of urbanization, or proximity to colleges) are supposedly saturated with information relevant to success in the nonfarm occupational world, are either more or less likely to make one of the occupational choices rather than another. There is no relationship whatsoever.

# SUMMARY AND CONCLUSIONS

Our data on this sample of Wisconsin farm boys who were seniors in high school in 1957 suggest that the hypotheses we advanced either require modification or may be flatly rejected. The original wording of each partially acceptable hypothesis, together with appropriate modifications (in italics), follow:

 $H_1$ : Planning to farm or planning to choose other blue-collar or lower white-collar occupations tends to depress levels of concern with the educational means for higher occupational achievement, but choosing a professional or executive occupation tends to raise them.

 $H_{s}$ : The more receptive he is to new information, the less likely a farm boy is to plan to farm or to choose a blue-collar or lower white-collar occupation, and the more likely he is to choose a professional or executive occupation.

 $H_{sa}$ : The greater the degree to which significant others expect high achievement for him, the less likely the farm youth is to plan to farm or to choose a blue-collar or lower white-collar occupation, and the more likely he is to choose a professional or executive occupation.

On the other hand, two hypotheses must be rejected. These are:

 $H_{sb}$ : The greater the resources significant others can provide, the more likely the farm youth is to plan to farm.

 $H_4$ : The greater the degree to which the general environment is saturated with information relevant to success in the nonfarm occupational world, the less likely the farm youth is to plan to farm.

Several conclusions are warranted. First, several classes of variables (among them, planning to enter professional or executive occupations, having the abilities to enter professional or executive occupations, being interested in attending college, and having significant others who expect high educational achievements) tend to be related to achievement in modern American society. Where reliable differences are observed, they tend to separate those who plan to enter professional or executive occupations from all of the other three groups. These variables are notably unsuccessful in separating those farm boys who choose farming from those who choose blue-collar occupations or those who choose lower level white-collar occupations.

Second, planning to farm neither influences uniquely nor is influenced uniquely by other achievement-related variables. This suggests that proposals for changing the levels of aspiration and achievement of farm boys by changing plans regarding farming, as well as descriptions of the occupational achievement process that view the decision regarding farming as uniquely important, need to be modified.<sup>15</sup>

Third, if we wish to pursue our study of factors involved in choosing farming, we shall ultimately have to face the question of why a boy chooses farming rather than another occupation he considers to be at about the same level. Perhaps most important here is the need to

<sup>15</sup> See Haller, "The Occupational Choice Process . . . ," op. cit., and "Occupational Choice Behavior . . . ," op. cit. correlate access to a farm with planning to farm. Moreover, we will evidently have to look for variables other than those involved in the achievement syndrome. Some of these will probably be personality variables or expectations of significant others, but the exact content of these factors will be quite different from that of the ones analyzed here and, for the most part, in other studies.

Fourth, as measured in this study, monetary resources of the parents had little to do with occupational choice; this result appears at first sight to be contradictory to other findings<sup>16</sup> and requires explanation. Unfortunately, we can only speculate at this point. One possibility is that in this study each question utilized to determine economic resources was tied to expenditures for higher education. But parents who have sufficient resources to send children to college also would be expected to be more nearly able to help a son get started in farming if that were his choice. Then, too, the hypothesis appears to imply that even if those choosing farming and those choosing professional and executive occupations do not differ substantially from each other, they should both differ greatly from those choosing blue-collar or lower white-collar occupations. Clearly, there is no evidence to support this in our data. A more likely explanation of the negative result is that groups beyond the family or other sets of significant others are looked upon as sources of economic resources. Perhaps the family's credit rating was more important than its actual wealth, and the recent general concern with education may have broadened the farm boy's awareness of sources of support for education. Evidently, a thorough study is needed of knowledge of and beliefs about sources of support, as well as actual sources of support, both for farming and for higher education. Such data should help provide a more adequate basis for assessing the influence of monetary resources on occupational plans than was possible in our study. Future work should also look into the influence of non-monetary resources on occupational choices.

Fifth, the failure of the general environment or social context variables to show any marked relation to occupational plans is contrary to most contemporary thinking on the subject,<sup>17</sup> yet is consistent with the Sewell and Armer findings in Milwaukee.<sup>18</sup> Moreover, our research concerned the degree to which the general environment is saturated with information relevant to success in the nonfarm world. The measures used here are quite indirect (although they are probably better than those ordinarily used to measure this type of variable). Future studies should incorporate more direct measures. In any case, our data

<sup>17</sup> This literature is reviewed in Sewell and Armer, op. cit. <sup>18</sup> Ibid.

<sup>&</sup>lt;sup>16</sup> Kaldor et al., op. cit.; Straus, "Personal Characteristics . . . ," op. cit., and "Societal Needs . . . ," op. cit.

suggest that future attempts to describe the farm boy's occupational choice process should not overemphasize the influence of variables such as these. Furthermore, practical attempts to raise the levels of occupational achievement of farm boys by influencing only the information available in the general environment probably would not be very successful (a point made in previous publications).<sup>19</sup>

Sixth, proximal factors such as variables referring to individual characteristics and to significant others seem to help to account for occupational choice variation among farm boys. It seems evident, then, that future efforts to explain or to modify occupational choice behavior will be most fruitful if concentrated primarily upon factors immediately and directly impinging upon the individual.

Finally, we wish to present a few words of warning. First, the variables used here are, for the most part, of unknown reliability and validity: it is possible that more precise instruments would yield somewhat different findings. Second, the data were taken from boys who were high school seniors. Approximately 15 percent of Wisconsin farm boys drop out of school before reaching the senior level. No information is available on these dropouts, but in all probability they planned to enter and did enter farming or blue-collar occupations. Third, the conditions that prevailed in Wisconsin in 1957 are not necessarily the same as those in other regions in the United States or even in other North Central states. Fourth, it follows that these data alone do not provide sufficient bases for flatly accepting or rejecting the key hypotheses concerning the occupational choice process of farm youth.

Nonetheless, the data are superior to those of most other studies in that the universe studied is a large and complex state with great variation in its farm population; the sample is large and randomly drawn; and the variables are neither inappropriate nor ill-constructed. Despite possible limitations, our research shows that some of the key hypotheses in the contemporary microtheory of farm boys' occupational choice behavior require important modifications and that others may be untenable.

<sup>19</sup> Haller, "Occupational Choice Behavior . . . ," op. cit., and "The Occupational Choice Process . . . ," op. cit.; Sewell and Haller, loc. cit.