

## BRIEF ARTICLES AND COMMENTARY

### SIGNIFICANT OTHERS AND THEIR ROLE RELATIONSHIPS TO STUDENTS IN A HIGH SCHOOL POPULATION

JOSEPH WOELFEL

Department of Sociology, University of Illinois, Urbana-Champaign

#### PREVIOUS RESEARCH

The educational structure in the United States, despite occasional laments to the contrary, is very heavily involved in the occupational structure; so closely are the two intertwined, in fact, that it is scarcely possible to discuss one without discussing the other. Psychologically, educational and occupational aspirations are closely intercorrelated ( $r$ 's range in the low .70s); in fact, the best single predictor of occupational aspiration is educational aspiration (Woelfel and Haller, 1971). These psychological entities are not without effect, for educational aspiration is highly related to educational attainment ( $r = .61$ ) and in fact is its best single predictor; occupational aspiration (which is in part determined by educational aspiration), in conjunction with educational attainment, accounts for 34 percent of the variance in occupational attainment seven years after high school, and this with fairly crude early measures (Sewell, Haller, and Portes, 1969).

What the data tend to show, it seems, is that students take their occupational aspirations into account when setting their educational aspirations (and vice versa), and these aspirations go on to influence later educational attainments and occupational attainments.

The study of educational and occupational aspirations, then, has critical repercussions on educational and occupational attainments and, as an inevitable result, on patterns of vertical mobility and the future shape of the nation's stratification system. An understanding of how educational and occupational aspirations are set is a partial key to an understanding of the underpinnings of a society's social structure.

As data about the setting of aspirations has accumulated, we have come more and more to understand the process as an interpersonal one. Bordua (1960) suggested that the known effect of socioeconomic status (SES) in aspirations was mediated by parental influence, and Sewell and Shah (1968) showed this to be true in part if not in total. Haller and Butterworth (1960) demonstrated a relationship between the plans of peer friends and the aspirations of high school students. Sewell, Haller, and Portes (1969) broadened these initial hypotheses by suggesting that it was not simply parental or peer influence, but interpersonal influence in general which mediated the effect of SES. Using a constructed index of significant other influence consisting of the student's perception of whether or not his teachers and parents expected him to go to college and whether most of his peers planned to go to college, they were able to show that the variance between SES and both educational and occupational aspirations was fully mediated by significant other influence, at least in their rural farm high school sample: they were able to explain 41 percent of the variance in educational aspirations and 34 percent of the

		Focus of definition	
		Self	Object
Type Definition	Model	Model for self	Model for object
	Definer	Definer for self	Definer for object

Figure 1. Schematic representation of the four modes of significant others' influence

variance in occupational aspirations. Using the same instruments, Sewell et al. (1970) were able to show the same pattern of results on a sample of urban high school students drawn from Milwaukee, accounting for 39 percent of the variance in educational and 31 percent of the variance in occupational aspirations.

The problem with measures like this, of course, is that the results depend not only on how much influence significant others really account for but also on the degree to which the preselected panel of significant others is representative of the true significant others of the students involved. In the absence of a valid instrument which would detect the exact significant others of students, such indices are perhaps the best we can do, but lacking true data about significant others (such as would be provided by a valid instrument) we do not know whether or not the indices are valid.

#### THE WISCONSIN SIGNIFICANT OTHER BATTERY

At least partly in response to problems like these, Haller and Woelfel (1969) developed and exposed to fairly elaborate validation research a set of instruments which purport to detect the exact significant other for education and occupation for any individual.<sup>1</sup> These instruments, comprising the Wisconsin Significant Other Battery (WISOB), operate on the assumption that a person's attitudes are his conceptions of relatedness between person and object, and that the modifications of definition either of object or of self will modify an attitude. They further assume that these definitions of self and object themselves depend upon the definitions of larger cognitive structures or "filter categories." The final assumption of these instruments is that interpersonal influence may be exercised by those persons who influence the definitions of self or object or the filter categories on which they depend, either by word

<sup>1</sup> The Wisconsin Significant Other Battery provides instruments for the measurement of expectations and aspirations of others as well as aspirations of the individual. Although the instrument is too complicated to describe here, it is described in comprehensive fashion in Haller and Woelfel (1969).

(significant others of this type are called *definers*), or by example (significant others of this type are called *models*). These are thus four modes of influence, as illustrated in Figure 1.

By assigning one point for each of the modes of influence exercised by any person, one may construct a crude index of degree of influence, varying between zero (no influence) and four. Substituting the exact expectations of significant others detected by this instrument in the model set up by Sewell, Haller, and Portes (1969) increases explained variance to 57 percent for educational aspirations and 48 percent for occupational aspirations, increases of 16 and 14 percent, respectively (Woelfel and Haller, 1971).

An instrument of known validity and reliability which exactly detects the significant others for any individual should enable us to shed some light on the important question underlying indices like those of Sewell, Haller, and Portes: *Who are significant others?*

With these objectives in mind, we drew a sample of 400 high school juniors from a high school in a medium-sized Wisconsin city (population 37,987) and administered the WISOB Significant Other Elicitors, the Occupational Aspiration Scale (Haller and Miller, 1963), and the WISOB Student Identification Form (an instrument which elicits simple identification data, such as name, address, age, sex, grade in school, and parent's occupation). This article reports on a 25-percent random sample of that sample, those who received the occupational forms of the WISOB. This resulted in a completed and usable sample of 90 students.

The mean prestige value of the occupations of the fathers of the students in the sample, as scored by the Duncan revision of the NORC occupational prestige scale, is 63.26, with a standard deviation of 14.33. The level of occupational aspiration, as measured by the occupational aspiration scale, of the students in the sample has a mean value of 39.78, with a standard deviation of 10.13. This is not very far from the values reported by Haller and Miller (1963) in their original study ( $\bar{X} = 56.2$ ;  $s = 12.99$ ) and so the sample does not appear unrepresentative on that score. Females are overrepresented in the study (68 females to 22 males), a fact which may be a drawback as far as the occupational aspiration scale is concerned, for this instrument was not specifically designed for female populations although there is evidence that it works well for females. The WISOB is designed for administration to both females and males.

The best that can be said of the sample is that, although it would not be safe to call it unqualifiedly representative of the kind of universe to which the WISOB is meant to be administered, none of its known parameters indicate that it is grossly deficient.

### THE IDENTITIES OF SIGNIFICANT OTHERS

The first question of interest concerns the pattern of interpersonal influence surrounding the student: How many significant others does he have, and who are they? The mean number of significant others<sup>2</sup> elicited was 6.86, with a standard deviation of  $\pm 3.59$ . They are distributed as in Table 1.

<sup>2</sup> Because the occupational form of the WISOB was administered, these significant others purport to be influential for occupational attitudes.

Table 1. Relationship of the significant other to the subject by the level of influence of the other

Level of influence	Relationship of significant other to subject									
	Father	Mother	Brother	Sister	Other relative	Peer friend of same sex	Peer friend of opposite sex	Teacher or guidance counselor	Adult friend or acquaintance	Friend, unspecified
4	(14) 27.5 20.9	(7) 13.5 9.2	(2) 3.9 10.5	(7) 13.7 19.4	(6) 11.8 7.7	(3) 5.4 2.1	(1) 2.0 2.7	(3) 5.9 5.7	(4) 7.8 4.7	(4) 7.8 6.9
3	(15) 14.7 22.4	(13) 12.7 17.1	(3) 2.9 15.8	(6) 5.9 16.7	(13) 12.7 16.7	(31) 30.4 21.4	(6) 5.9 16.2	(3) 2.9 5.7	(10) 9.8 11.8	(2) 2.0 6.9
2	(22) 9.7 32.8	(41) 18.1 53.9	(7) 3.1 36.8	(9) 4.0 25.0	(28) 12.4 35.9	(46) 20.4 31.7	(9) 4.0 24.3	(27) 11.9 56.9	(29) 12.8 34.1	(7) 3.5 24.1
1	(16) 8.4 23.9	(15) 6.0 19.7	(7) 2.8 36.8	(14) 5.6 38.9	(31) 12.4 39.7	(65) 26.0 44.8	(21) 8.4 36.8	(20) 8.0 37.7	(42) 16.8 49.4	(18) 7.6 52.1
Total	(67) 100%	(76) 100%	(19) 100%	(36) 100%	(78) 100%	(145) 100%	(37) 100%	(53) 100%	(85) 100%	(33) 100%

Chi-square = 76.17, 27 d.f.,  $p < .05$ .

Note: This table is so arranged that both level of significance and (generally) distance of relationship from the subject increase as one moves away from the origin. The first value (in parentheses) is the cell frequency, the second is the percentage of the row, and the third is the percentage of the column.

Table 2. Relationships of significant others to the subject rank-ordered by frequency of mention and by calculated index,<sup>a</sup> with level of influence controlled

	Level of influence of significant others											
	All levels			Level 4			Level 3			Level 2		
	f	% <sup>b</sup>	Rank	f	% <sup>b</sup>	Rank	f	% <sup>b</sup>	Rank	f	% <sup>b</sup>	Rank
Father	67	10.7	5	14	27.5	1	15	14.7	2	22	9.7	5
Mother	76	12.3	4	7	13.7	2	13	12.7	3	41	18.1	2
Brother	19	3.0	10	2	3.9	6	3	2.9	6	7	3.1	7
Sister	36	5.7	8	7	13.7	2	6	5.9	5	9	4.0	5
Other relative	79	12.4	3	6	11.8	3	13	12.7	3	28	12.4	4
Peer friend of same sex	145	23.1	1	3	5.9	5	31	30.4	1	46	20.4	1
Peer friend of opposite sex	37	5.9	7	1	2.0	7	6	5.9	5	9	4.0	6
Teacher or guidance counselor	53	8.4	6	3	5.9	5	3	2.9	6	27	11.9	4
Adult friend or acquaintance	85	13.5	2	4	7.8	4	10	9.8	4	29	12.8	3
Friend, unspecified	33	5.3	9	4	7.8	4	2	2.0	7	7	8.5	6
Total	629	100%		51	100%		102	100%		226	100%	
										250	100%	
										1,189	100%	

<sup>a</sup> The frequency of mention times the level at which mentioned.

<sup>b</sup> The percentage of all mentions that the role comprises.

Table 1 lists the role relationships of the significant others and the subject by the level of significance of the significant other. As explained earlier, the level of significance varies from zero (not included in the table) to four. This is an unorthodox table. Because the cells in the table are not of equal dimensions (for example, in the normal family, an individual may list many friends as significant others, but only one father and mother), the standard chi-square technique based on the individual as the unit of analysis is not possible. This table has the significant other as the unit of analysis: note that  $N = 629$ —the number of significant others elicited—rather than 90, the number of students participating. The rationale for this table, and for most of those to follow, is this: The 629 significant others identified by the WISOB Significant Other Eliciter are considered a sample of all significant others. The test itself is viewed as a procedure for classifying those significant others, with each classification of each significant other considered one case. The WISOB Significant Other Eliciter is more or less valid insofar as it classifies them "correctly." What a "correct" classification would be is as doubtful as current theory is tentative, but the tendency to classify closely related significant others as highly significant others is probably "correct." Within this scheme, the figure in each cell represents the conditional probability of a significant other's holding a certain role relation to ego, given that it is certain that he is a significant other of a given rank. Thus, according to Table 1, given that it is certain that a significant other is of significance level 4, the probability that he is also the individual's father is .275. What effect this procedure has on the validity of chi-square values is unknown, but they have been computed for the convenience of the reader and appear in the tables.

Table 1 tends to indicate what we might indeed expect with this sample: reading the top values in the cell shows that level of significance increases as the proximity of relationship of the significant other to ego increases. For example, 58.6 percent of all highest-ranked significant others are members of the nuclear family, in contrast to only 20.8 percent of the lowest-ranked. The bottom figures represent the probability that a significant other of a given role relation also is a significant other of a given level, given that it is certain that he is a significant other. Table 1 shows that certain roles, when mentioned, tend to be mentioned at high levels, others at low levels. This tendency is shown even more clearly in Table 2.

Table 2 contains six major columns consisting of three subcolumns each. Column one lists, in subcolumns one through three, the frequency with which each role is mentioned, the percentage of all mentions that the role comprises, and the rank of the role according to frequency of mention. Columns two through five list frequency of mention, percentage, and rank of roles within each level of significance. Column six consists of a calculated index (the frequency of mention of each role times the level at which mentioned), percentage, and rank based on the calculated index. The Spearman rank-order correlation between the calculated index and the ranking, based on frequency of mention for all levels, is .84. Column one, for example, indicates that fathers accounted for 67 of the 629 significant others mentioned, or that 10.7 percent of all significant others mentioned were fathers, and that this was the fifth most frequently mentioned role. In the same row, column two indicates that 14 of the 51 highest-level (level four) significant others mentioned, or 27.5

percent, were fathers, and that of all highest-level significant others, fathers were most frequently mentioned.

Within the limits of inference imposed by the sample, this is an interesting table. First of all, that mother and father rank only fourth and fifth, respectively, in frequency of mention is not so surprising in view of the fact that the typical student has only two parents whom he can mention, whereas he can list almost any number of friends or other relatives. At the highest level of influence, father and mother rank one and two, respectively, which is entirely consistent with what has generally been assumed in the field. What does tend to be surprising is the performance of parents relative to peer friends in the final index (column six). Peer friends rank consistently high, except in the highest level of influence.

Because the ranking system of the WISOB rates the significance of others according to the number of modes of influence operating, and because one mode (model for object) operationally requires that the person exercising it hold a job with characteristics similar to those of the one to which the subject aspires, it is virtually impossible for a peer friend to exercise all four modes and thus fall into level four of significance. In fact, only 4 peer friends out of 145 do so. With this stipulation in mind—that peer friends are virtually excluded from one of the four modes of influence—their overall showing in the final index is very impressive. Without correlations between significant others' expectations and the subject's expectations for confirmation, it would tentatively seem that the constellation of influence from all peer friends at a given moment in time exceeds that of either father or mother by a wide margin and almost equals that of both parents together.

Another surprising showing is that of adult friends or acquaintances. Second most frequently mentioned, they are ranked fourth in the calculated index of influence, accounting for 12.3 percent of the interpersonal influence at a given moment in time. This is surprising in light of the fact that Sewell, Haller, and Portes (1969) do not include them in their Index of Significant Others, especially since they account for half again as much influence according to this design as do all teachers and guidance counselors, whom Sewell, Haller, and Portes do include. It is not surprising, however, to learn that students look to adults whom they know for information about occupations, even if it is mildly surprising to see that they look to them more than they do to teachers, guidance counselors, and other professionals whose official task it is to provide that information. Even other relatives (not members of the nuclear family) outrank teachers and guidance counselors, both in frequency of mention and in the calculated index.

This table, then, can aid in evaluating the Sewell, Haller, and Portes Index of Significant Other Influence. Summing the percentages accounted for in this table by the constituents of the Sewell, Haller, and Portes Index (parents, peers, teachers, and guidance counselors), we find that that index would account for about 60 percent of all significant others mentioned (from column one) and about 67 percent of the total interpersonal influence shown in this table (from column six).

Here, certain qualifications should be made. First, of course, is simply the reminder that this study speaks only about that interpersonal influence which is directed toward occupational attitudes. It may well be (and almost un-

Table 3. The relationship of the significant other to the subject by sex of the subject, in percentages

Sex of subject	Relationship of the significant other to the subject									
	Father	Mother	Brother	Sister	Other relative	Peer friend of same sex	Peer friend of opposite sex	Teacher or guidance counselor	Adult friend or acquaintance	Friend, unspecified
Male (N = 118)	15.3	10.2	5.1	4.2	15.3	14.4	1.7	9.3	18.6	5.9
Female (N = 511)	5.6	12.5	2.5	6.1	11.7	25.0	6.8	8.2	12.3	5.1
Total (N = 629)	(67)	(76)	(19)	(36)	(78)	(145)	(37)	(53)	(85)	(33)

Chi-square = 19.35, 9 d.f.,  $p < .05$ .

doubtedly is) the case that parental influence extends to almost all other attitudes, whereas the influence of some of the others (teachers, for example) may be segmental. Second, and of equally great importance, is that this is a static measure of interpersonal influence. Parental influence has been exercised from infancy, whereas the influence of specific peers, teachers, and others is only contemporaneous. The actual composition of the peer group, for example, changes, even though the category name stays the same. One generally keeps the same parents throughout life. Thus, parental influence in general and over the course of time is underestimated here. Third, there is the possibility that the figures are distorted by a few individuals who report enormous numbers of friends. Evidence to be presented a little farther on will tend to show that this is at least partially the case, but that the differences also are partially sex differences.

Table 3 shows that there is a clear difference between patterns of role relationships of significant others for males and females in this sample, and illustrates as well the unfortunate sex distribution in this particular sample. Table 4 presents the same data, along with frequencies of mention, rank, and the same kind of calculated index as was presented in Table 2. The Spearman rank-order correlation between the ordering for male and female, based on the calculated index, is .752. The calculated index is related to the frequency-of-mention ordering: for males .968 and for females .939 (again using Spearman's  $r_s$ ). Here it becomes quite apparent that the strong showing of peer friends of the same sex is largely the result of the female sample. For females, peer friends of the same sex as the respondent are ranked first both in frequency of mention and in the calculated index, accounting for 25 percent of the significant others mentioned and 23.2 percent of the influence; for males they rank fourth and third on the two indices and account for only about 14 percent of the influence.

Table 4. Rank order of roles of significant others by sex of subject

Relationship of significant other to subject	Male						Female					
	All levels			Calculated index (fx)			All levels			Calculated index (fx)		
	f	%	Rank	fx	%	Rank	f	%	Rank	fx	%	Rank
Father	16	15.3	3	44	19.8	1	49	9.6	5	117	11.8	3
Mother	12	10.2	5	21	9.5	4	64	12.5	2	143	14.5	2
Brother	6	5.1	8	14	6.3	6	13	2.5	10	24	2.4	19
Sister	5	4.2	9	5	2.3	8	31	6.1	8	73	7.4	7
Other relative	18	16.3	2	37	16.7	2	60	11.7	4	113	11.4	4
Peer friend of same sex	17	14.4	4	31	14.0	3	128	25.0	1	231	23.2	1
Peer friend of opposite sex	2	1.7	10	2	0.9	9	35	6.8	7	59	5.9	8
Teacher or guidance counselor	11	9.3	6	17	7.6	5	42	8.2	6	78	7.9	6
Adult friend or acquaintance	22	18.6	1	37	16.7	2	63	12.3	3	109	11.0	5
Friend, unspecified	7	5.9	7	13	5.9	7	26	5.1	9	44	4.4	9
Totals	118	100.0		221	100.0		511	100.0		991	100.0	

The performance of father for males (third in mentions with 15.3 percent; first in calculated index at 19.8 percent) is not surprising, for most students have only one father; he certainly ought to be relevant for occupational decisions, and more so for males than for females. What does stand out, however, is the performance of other relatives for males (second in mentions at 15.3 percent; second in calculated index at 16.7 percent) and of adult friend or acquaintance (first in mentions at 18.6 percent; second in the calculated index at 16.7 percent—tied with other relatives).

Another related tendency which Table 5 shows more clearly is the tendency for people to choose significant others of the same sex.

Table 5. Sex of significant others according to sex of subject

Sex of subject	Male significant others: father, brother, and male peer friends (N = 138)	Female significant others: mother, sister, and female peer friends (N = 242)
	percent	
Male (N = 60)	68.3	31.7
Female (N = 320)	30.3	69.7
Total (N = 380)	(138)	(242)

Chi-square = 31.58, 1 d.f.,  $p < .001$ .

Table 6. Rank ordering of relationships of significant other to subject by percentage of subjects mentioning each relationship, with sex of subject controlled

Relationship of significant other to subject	Male		Female	
	percent mention	Rank	percent mention	Rank
Father	81.8	1	73.5	3
Mother	54.5	2	95.6	1
Brother	22.7	5	17.6	9
Sister	18.2	6	36.8	6
Other relative	36.4	3	51.5	4
Peer friend of same sex	31.8	4	75.0	2
Peer friend of opposite sex	9.1	8	36.8	6
Teacher or guidance counselor	31.8	4	32.4	7
Adult friend or acquaintance	54.5	2	41.2	5
Friend, unspecified	22.1	7	22.1	8

These figures can again be used to assess the adequacy of the Sewell, Haller, and Portes Index of Significant Other Influence. For males (the Sewell, Haller, and Portes sample was all male) the index accounted for about 57 percent of all significant others and about 58 percent of all influence. Had it been used on a female population, it would have accounted for about 67 percent of the significant others and 58 percent of the influence.

#### PATTERNS OF SIGNIFICANT OTHERS FOR EACH INDIVIDUAL

Up to this point, all the tables presented have used the "significant other" as the unit of analysis, laying themselves open to the charge of possible "padding" of certain role categories (for example, "peer friends"), for it is entirely possible that the large number of mentions (and consequently high value of the calculated index) could be caused by a few individuals' mentioning large numbers of friends. Table 6 casts some light on that possibility. It shifts to the individual as unit of analysis by listing the proportion of individuals who list or do not list a role category. Table 6 shows that the high value of peer friends of the same sex for females is not entirely due to a few girls who list many friends, for 75 percent of all females sampled list at least one peer friend of the same sex. It also shows, of course, that although "peer friend of the same sex" is in general the most important single influence category for females, 25 percent of the females in the sample do not list any peer friends at any level.

The problem of padding seems important, however, with the "other relative" category, which is ranked second in both frequency of mention and the calculated index for males, but 63.6 percent of all males in the sample do not mention it at all. Apparently, the 36.4 percent who do mention other relatives do so very frequently. The same objection may be sustained with regard to the "adult friend" category (first in mentions, second in calculated index for males, yet not mentioned by 45.5 percent of the males in the sample) though not to so great a degree.

All of this is taken into account in Table 6, which ranks the role categories in order of the proportion of individuals who mention them. In spite of the objections raised above, the shifting in rank as a result of using this new measure is very slight. As is to be expected, generally the multimember categories tend to decrease in rank relative to those which can have only one occupant and which consequently can be mentioned by each respondent only once; but the shift does not greatly affect the rankings. The Spearman rank-order correlation between the rank ordering which results from using the calculated index and this new rank ordering which results from using the number of individuals mentioning the role is .98 for females and .91 for males.

Although the data are not presented here,<sup>3</sup> the sample was subdivided into three categories of socioeconomic status based on the NORC prestige rating of father's occupational prestige (as revised by Duncan), but no statistically significant differences in role relation of significant others to focal individuals could be noted based on either the aggregate measure or the frequency of mention by individual. Similarly, no differences were found across rural and urban samples. In the same fashion, the sample was divided into low, medium, and high aspirers, but again no statistically significant differences in significant other role patterns could be found across levels of aspiration. Thus, it seems that high-status youth do not choose significant others different (by role, at least) from those chosen by middle- or low-status youth; rural youth have much the same kinds of significant others as urban; and high aspirers also have the same role relations with significant others as middle and low aspirers.

### SUMMARY

The development of the field of educational and occupational attainment studies has reflected more and more the influence of "significant others," and insofar as these others transmit information which largely controls the process of vertical mobility, an understanding of who they are is of critical importance.

This article presents such information based on administration of the WISOB to 90 high school students in a medium-sized Wisconsin city.

The theory on which the instrumentation rests, briefly, says that significant others are those persons or groups of persons who, through direct communication (definers) or by standing as referent objects which ego observes (models) provide information to ego about himself or the objects of his experience, or about the filter categories of which he sees himself or the objects of his experience to be members.

Results of this administration indicate that there is a tendency for incumbents of some roles to be influential more frequently than others, and that this tendency differs for males and females, with males tending to choose male significant others and females tending to choose female significant others. For males, fathers, family members other than the nuclear family, adult friends or acquaintances, and peer friends of the same sex seem to be most influential, whereas for females, peer friends of the same sex, mothers, fathers, and other relatives not members of the nuclear family seem most influential.

<sup>3</sup> Detailed tables are available from the author on request.

Although there is some patterning in the relative frequency and intensity with which incumbents of certain roles act as significant others for individuals, there is great individual variability in this sample. The "adult friend" role, for example, is the role mentioned second most frequently by males, and retains its second ranking even when intensity of influence is included in the index, yet 64 percent of the males in the sample do not list adult friends at all. This illustrated well the danger of checklist instruments for the detection of significant other influence, for if such a checklist were used in this instance, the researcher would be faced with the dilemma of either excluding the second most influential role in the sample or including it despite knowing that it would not apply to 64 percent of the subjects.

The role relations of significant others to subjects do not seem to vary by residence, SES, or level of occupational aspiration. This finding is substantively important, for it implies that the kinds of persons who influence high school students seem invariant across major structural divisions (rural-urban residence and SES, for example), and that differences in role-patterns of significant others do not, in this sample, have major implications for the status aspirations of students.

### REFERENCES

- Bordua, David J.  
1960 "Educational aspirations and parental stress on college." *Social Forces* 38 (March):535-548.
- Haller, Archibald O., and C. E. Butterworth  
1960 "Peer influences on levels of occupational and educational aspirations." *Social Forces* 38 (May):289-295.
- Haller, Archibald O., and Irwin W. Miller  
1963 *The Occupational Aspiration Scale, Theory, Structure, and Correlates*. East Lansing: Michigan Agricultural Experiment Station, Technical Bulletin 142.
- Haller, Archibald O., and Joseph Woelfel  
1969 *The Wisconsin Significant Other Battery*. Final Report, Project 5-1170. Washington, D.C.: U.S. Office of Education.
- Sewell, William H., Archibald O. Haller, and George W. Ohlendorf  
1970 "The educational and early occupational status attainment process: Replication and revision." *American Sociological Review* 35 (December):1014-27.
- Sewell, William H., Archibald O. Haller, and Alejandro Portes  
1969 "The educational and early occupational attainment process: Wisconsin farm-reared man (1957-1964)." *American Sociological Review* 34 (February): 82-92.
- Sewell, William H., and Vimal P. Shah  
1968 "Social class, parental encouragement, and educational aspirations." *American Journal of Sociology* 73 (March):559-572.
- Woelfel, Joseph, and Archibald O. Haller  
1971 "Significant others, the self-reflexive act, and the attitude formation process." *American Sociological Review* 36 (February):74-87.