Actes
Du Vingt-Deuxième Congrès
De L'Institut International
De Sociologie

Rome, 15-21 Septembre 1969

Volume I

Financé par le Consiglio Nazionale delle Ricerche

Publié dans la
Revue Internationale de Sociologie, Serie II, Vol. V (1969), 3

Universita Degli Studi Di Roma

ACTES DU VINGT-DEUXIÈME CONGRÈS DE L'INSTITUT INTERNATIONAL DE SOCIOLOGIE

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IDENTIFYING SIGNIFICANT OTHERS AND MEASURING THEIR EXPECTATIONS FOR A PERSON (*)

Problem

The problem of measuring the influence of significant others is really two problems — 1) detecting the exact significant others for any person, and 2) measuring whatever it is that these others do, or are, that renders them influential. It goes without saying, of course, that any instrumentation should be valid and reliable, but in order to make it feasible to use an instrument in research in which other data is to be collected as well, economy, certainly of money but particularly of time, also becomes essential. A genuinely satisfactory instrument for measuring significant other influence, then, must be an economical, rapid administration instrument of known validity and reliability which a) detects the exact significant others for any person, and b) measures directly those characteristics or behavior by which influence is transmitted to that person. Although several ingenious and worthwhile instruments measuring aspects of significant other influence have been devised, up until now no single instrument has been able to meet *all* these criteria (Rushby, pp. 25-30; Haller and Woelfel, 1969, Chapter II).

(*) The research reported here was supported by the U.S. Office of Education, by the University of Wisconsin College of Agricolture, through North Central Regional Research Committee NC-86, by funds to the Institute for Research on Poverty at the University of Wisconsin provided by the Office of Economic Opportunity pursuant to the provisions of the Economic Opportunity Act of 1964, by the Graduate School of the University of Wisconsin, and by the Graduate Research Committee of the University of Illinois. The writers are grateful to Edward L. Fink for assistance in all phases of the research, particularly tre statistical analysis; and to Helcio A. Saraiva for computer programming assistance.

This problem has been a particular handicap to the study of the educational and occupational attainment process. As early as 1960 it has been suggested that the major source of educational and occupational aspirations was parental influence, (Bordua) and shortly this hypothesis was broadened to other forms of significant other influence (Haller and Butterworth), but as yet no definitive evidence has been gathered, at least partly due to lack of suitable measurement device. It was to fill this need that the Wisconsin Significant Other Battery (WISOB) was constructed.

Theory

Although frequently attributed to Mead, (Merton, p. 215; Rose, 11, 141) the term « significant other » was most likely coined by Harry Stack Sullivan, (Sullivan, 1940) and has a fairly specific meaning. As Cottrell and Foote (Cottrell, Foote, pp. 190-191) suggest:

> The correspondence between Mead & Sullivan leaves off at the point the generalized other. For Mead, whose lifespan came a generation before Sullivan's, the social world was a fairly wholesome web; the others from whom one took his conception of himsel were in substantial agreement. Hence the « generalized other » of Mead's social psychology. In Sullivan's time, and ours, the community has been fractured. The generalized other has broken down into clusters of significant others . . .

Thus implicit in the term « significant other » is the notion of *segmentalized* influence, with the possibility open of different significant others influencing different areas of the self-conception, or even different attitudes. Consequently the WISOB was designed in separate versions for significant other's influence regarding education and regarding occupation.

In addition to our initial assumption that significant others are (or may be) attitude-specific, the WISOB is based on three key assumptions about attitudes:

1) Attitudes are not indivisible units, but rather are constructed of component parts. Consequently it is possible for a

significant other to exercise influence over *parts* of an attitude as well as the entire attitude; 2) attitudes and the components of attitudes themselves rest on larger cognitive structures (« filter categories ») and consequently may be modified indirectly by modification of these larger structures; and 3) influence over attitudes, their components or the larger structures on which they depend may be caused both by persons and groups who communicate norms, expectations or other self-object defining information to an individual or who stand as points of cognitive reference. In more concrete terms, by the first assumption we mean that an attitude consists of a relationship between the person and an object or set of objects, and that the whole attitude may be changed by changing the person's definition either of self, or object or both.

The second assumption follows the interactionist tradition, and presumes that the confrontation between person and object is always mediated by some symbolic structure (Kuhn, p. 8). In this sense, it is always a *conception* which is the object of an attitude. A person does not have an attitude toward a dog, but rather toward his conception of a dog.

But forming a conception of an object, no matter how vague, is a classification procedure; one forms a conception of what an object is by relating it to other objects of his experience, by associating it with some objects and differentiating it from others. This means placing it into a category of objects thought to be in some sense the same. These categories we call filter categories, insofar as they « filter » a person's perception of the objects within it. Clearly, the individual's orientation toward the category governs his orientation toward the objects within that category.

In searching out significant others (SO's), then, it is necessary not only to find those who directly influence the attitude in question, but also persons who have influenced the filter categories upon which ego's definitions of self and object depend.

The third assumption reflects the distinction originated by Kelly (Kelly, 410-414) between those others who communicate norms, expectations or definitions of behavior, objects, self con-

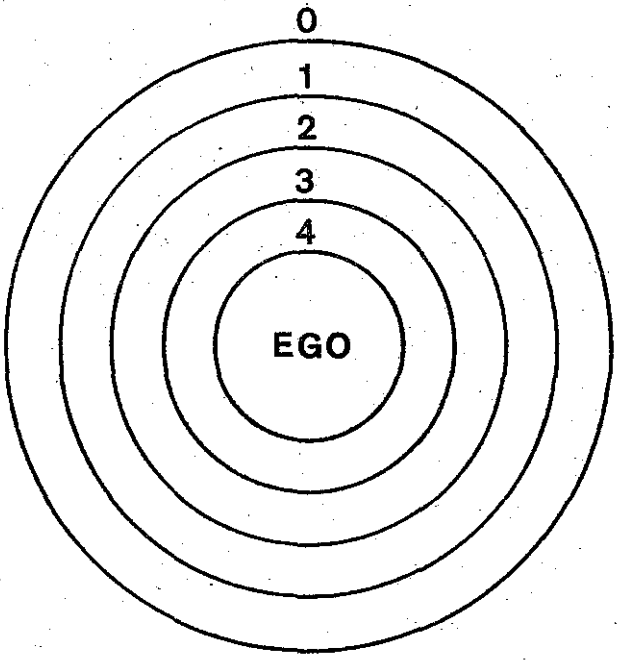
ception, etc., and those who in some way *exemplify* an attitude, occupational or educational position, or ego's self. For operational purposes the distinction we make between the two is based on the medium of influence: The former (which we call *definers*) communicate via a symbolic medium — usually language — definititions of ego, objects and their appropriate interrelationships; the latter (which we call *models*) need not transmit information linguistually, but are observed by ego to have some attribute, characteristic, position attitude which defines *by example* ego, the object in question or the relationship between the two.

In summary, significant others exercise their influence by defining objects (or the individual himself) into filter categories. They do so either by communication through a symbolic medium like language (definers) or by example (models). By cross classifying these techniques, four types of influence emerge: definers for object, definers for self, models for object and models for self. We further assume that, all other factors equal, the more of these modes of influence another exercises, the greater is his proportional influence on the attitude, and the greater his significance as an other.

The Significant Other Elicitors

The logic of the theory presented above demands that a satisfactory instrument cue an individual to think of the filter categories he uses to define the object in question and himself, then ask him about who provides information to him, either by word or example, about those categories. To cue a person to think of his filter categories implies that the filter categories are known in advance, however, and to this end interviews with high school samples were conducted. Sixty-one interviews, 31 with a selected sample of Wisconsin high school students and 30 from a sample of the significant others elicited in the former, yielded a list of several hundred filter categories for education and occupation. These were intuitively classified into four broader categories which may generally be described as 1) the intrinsic nature of the object, or what is essentially connected to it, e.g.,

installing pipe is essentially connected with the object « plumbing ». 2) Extrinsic nature, or the attributes of an object which are not essential to it; e.g., *living in dorms* is part of the extrinsic nature of the object « college education », 3) Intrinsic function or the essential purpose of an object — learning is an essential function of education, and 4) the extrinsic function, which refers to the ends an object may serve which are nonetheless not essential to it; thus *granting high status* is an extrinsic function of education.



Subsequent to the interviews described in section (²) above, initial questionnaire instruments were constructed. The questionnaires were based on the same theoretical presumptions as the interview protocols: that influence may be exerted on parts of (self and object) as well as whole attitudes; that that influence may be exercised through filter categories, and that the two primary modes of influence are defining and modelling. The one key deviation was that, in the interviews, subjects were all-

owed to supply their own filter categories for education, occupation and self, while in the questionnaire, filters are provided by the instrument itself.

Two basic instruments were constructed: one to detect occupational significant others and one to detect educational significant others. Various stimulus items cued the individual to think of the four filter categories for object and, after each such cue, asked questions designed to elicit models and definers. Then the test cued the individual to think of *his* relationship to each of the four filter categories, and asked model and definer questions again.

Two basic forms of each instrument were constructed: a long form in which the subject was asked to answer Likert type questions about each filter category, and a shorter form in which the filter categories were simply mentioned.

These fairly cumbersome early instruments were pretested on 20 high school students at Milton Union High School. Each student was interviewed briefly after taking the tests, and potential wording difficulties and misunderstandings were discussed. Regression lines for long and short forms for each individual were plotted and, based on this analysis, revised and shortened instruments were prepared and administered to another pretest sample in Madison (N - 20 High School Seniors) and, again, students were interviewed about their reactions to the test. Finally, a pretest sample of 429 high school juniors was drawn in Eau Clairc, Wisconsin, and the revised instruments were administered.

Two four-page questionnaire instruments, the Occupational and Educational Significant Other Elicitors (1), emerged from these pretests. Both are rapid administration questionnaires for use in either individual or group-testing situations which may be administered by non-technical personnel. Aside from wording changed in the items themselves, they are identical in concept to the original instruments described in the preceding section.

Each of the pages contains questions about one mode of influence (e.g., page 1 considers the definer for object mode).

(1) See Appendix A for specimen questions.

Thus the number of pages on which an SO's name appears represents his score as an SO. The maximum score for either educational or occupational SO's is thus 4. An SO who was maximally significant for both education and occupation would have a score of eight. Although more elaborate scoring systems have been investigated, none has yet shown marked superiority to this simple technique. Although WISOB SOE's purport only to detect *contemporaneous* significant others, repeated administrations would clearly identify those SO's who remain influential across time.

5) The Expectation Elicitors:

Once the significant others for any individual have been identified, a complete description of the interpersonal influence process still lacks a knowledge of the particular influences those significant others are transmitting to that individual. This task is the one for which the WISOB Expectation Elicitors (2) have been designed. The EE's were developed simultaneously with the SOE's, are based on the same 61 interview cases and theoretical presumptions, and are meant as a complement to those instruments. Most simply and generally, just as the SOE's operated by asking the individual who he talked to or used as a model about filter categories, the EE's operate by asking the SO's what they think about themselves or tell the individual about the objects or categories. Although the instruments are very simple, the fact that slightly different versions of each have been provided depending on the exact classification of the SO in question makes them somewhat difficult to explain concisely.

For those significant others who are identified as definers, expectations for ego are measured. For those identified as models, *aspirations* are measured. Since we assume influence to be attitude-specific, both educational and occupational instru-

(2) *Expectation Elicitors* is a convenient but not exactly accurate title since, although expectations *are* elicited by the instruments, expectations do not constitute *all* that is elecited. See Appendix B for specimen questions taken from forms for SO's who are definers.

ments are provided. Thus there are four basic expectation elicitors: 1) Definer for Educational Expectations. 2) Definer for Occupational Expectations. 3) Model for Education Aspirations, and 4) Model for Occupation Aspirations.

Both occupational instruments are variants of the Occupational Aspiration Scale (OAS), an instrument whose validity and reliability have been well documented elsewhere (Haller and Miller). Basically it measures the level of the occupational prestige hierarchy that the person believes is appropriate for himself. Most present modifications consist of simple variations in the personal pronouns which change only the person refered to and do not upset the overall pattern of occupational prestige response alternatives. The expectation Elicitor for Definers has been modified to ask the significant other to list the expectations he has for ego's rather than his aspirations for his own attainment; the model-type instrument, although like the original OAS aspirations for the person taking the test, has been modified to apply to any age range (e.g., « when your schooling is over » is changed to « if you were just out of school »).

The educational instruments are fairly straight forward. After naming the student in question, the definer-type instrument asks two items: 1) *Supposing* he/she had the necessary abilities, grades, money, etc., how far would you *really like to see him/her go in school?* (check one). 2) *Considering* his/her abilities, grades, financial resources, etc., how far do you *actually expect him/her to go* in school? (check one).

These items are followed by the response alternatives: quit school, finish high school, go to trade, business, secretarial or nursing school, go to a college (one that gives credit toward a bachelor's degree), get an advanced degree (Masters, Ph.D., or professional such as law or medicine). The model type instrument only changes the item wording to: *If you were a high school student*, and if you had the necessary grades, money, etc...

These four Expectation Elicitors, along with the two Significant Other Elicitors, form the major six instruments of the WISOB.

Reliablity

Although the Expectation Elicitors are straightforward instruments whose reliability may be tested in a conventional fashion, the significant other elicitors' unusual characteristics pose several key problems. First, the instrument's primary output is not a numeric score, but the names of persons. Secondly, even though it is possible to apply a numeric score of sorts to each person's name discovered, the SOE's purport to elicit only contemporaneous pattern of influence; the theoretical behavior of this variable is not well known, and so the stability of the phenomenon (as opposed to the test) is problematic. With these qualifications in mind, a sample of 292 high school seniors was drawn from a moderate sized city (1960 population about 13,000) with a mixed economy based on agriculture, commerce and light industry, and the educational and occupational forms of the SOE's were administered twice, once at the end of September and again at the beginning of December.

The two tests yielded a list of 5,942 significant others, each of whom was assigned a score for each administration, ranging from 0 to 4, corresponding to the number of modes of influence (i.e., model for object, definer for object, model for self, definer for self) he exercized. The product moment correlation from T_1 to T_2 for these scores is only .51 for the occupational form and .39 for the educational. Since the correlations are not large, it remains to be established whether the apparent instability indicated by such low values is due to measurement error or to actual shifting of the phenomenon itself.

The first relevant hypothesis was that, if the phenomenon itself were changing, most of the changes should occur at the lowest values, with proportionately fewer changes as the level of influence of the other increased. The reasoning behind this assumption is this: if the test is inaccurate or unstable, then errors should be randomly distributed across its scoring range, but if the phenomenon is changing, its less important elements (least significant others) ought to be substantially more prone to change over time. The *instrument* should make errors randomly; the *phenomenon* should change lawfully.

TABLE 1

EDUCATIONAL SIGNIFICANT OTHER ELICITOR SCORES AT T_1 AND T_2 (N = 5942)

Educational Scores at T_1	Educational scores at T_2					
	0	1	2	3	4	Total
0	1383	758	289	79	34	2543
1	1130	397	210	49	30	1816
2	350	214	334	81	29	1008
3	97	60	100	97	54	408
4	35	14	25	34	59	167
Total	2995	1443	958	340	206	5942

In order to test this hypothesis a contingency table which tabulates the significance score of each significant other at time 1 against his score at T_2 was developed including both long and short forms of the SOE. Tables 1 and 2 indicate the outcomes for the educational SOE and the occupational SOE.

TABLE 2

OCCUPATIONAL SIGNIFICANT OTHER ELICITOR SCORES AT T_1 AND T_2 (N — 5942)

Occupational Scores at T_1	Occupational scores at T_2					
	0	1	2	3	4	Total
0	2121	936	301	99	21	3478
1	776	337	187	65	11	1376
2	196	104	206	93	23	622
3	61	45	96	109	39	350
4	18	9	36	33	20	116

An absolutely stable phenomenon as measured by a perfectly reliable test would find all scores clustered on the ascending diagonal.

Tables 1 and 2 indicate quite clearly that the great bulk of shifting is taking place at low levels of influence; that it is the least significant of significant others who are doing the majority of the shifting. As table 3 shows (Table 3 is calculated from Tables 1 and 2), 62% of the lowest ranked educational SO's at T_1 did not recur at T_2, whereas only 21% of the highest ranked SO's did not recur at T_2; for the occupational tests, the results are

TABLE 3

PERCENTAGE OF EDUCATIONAL AND OCCUPATIONAL SIGNIFICANT OTHERS FOR GIVEN LEVELS AT T_1 WHO WERE NOT SIGNIFICANT OTHERS AT T_2 (N = 5942)

Significant other level at T_1	Type of significant other	
	Education	Occupation
	Percent	
1	62	56
2	34	31
3	23	17
4	21	15

the same; 56% of the least significant SO's at T_1 did not recur at T_2, while only 15% of the most significant SO's at T_1 did not recur at T_2.

Table 4 approaches the same phenomenon from a slightly different perspective by classifying all those who were identified as significant others at T_1 that did not recur at T_2 according to their rank as significant others at T_1. As Table 4 shows, lowest ranked

TABLE 4

PERCENTAGE OF NON-RECURRING EDUCATIONAL AND OCCUPATIONAL SIGNIFICANT OTHERS ACCOUNTED FOR AT EACH LEVEL (*)

Significant Other Level	Type of significant other			
	Education		Occupation	
	% lost	% of total	% lost	% of total
	Percent		*Percent*	
1	70	53	74	56
2	22	30	19	25
3	6	12	6	14
4	2	5	2	5
Total	100	100	100	100

(*) Chi-square is not computed because the differences are statistically significant due to sample size (N = 5942).

significant others accounted for changes beyond their proportion in the sample, with lowest ranked educational significant others of the lowest rank account for 74% of all losses, even though they make up only 56% of the total cases in the sample.

There is a third way to approach the same phenomenon. If the test itself is inaccurate or unreliable, then the score assigned to any given individual is relatively random, and those who were *not* significant others at T_1 but *were* elicited as significant others at T_2 should have no higher probability of being assigned one score than another when they do enter the system at T_2. Table 5 shows that this is not the case at all. As the table shows, of all those persons who were not elicited as educational significant others at T_1, 65% were identified as the lowest level significant others when they were identified as SOS at T_2, while only 3% of those who had not been significant others at T_1 were identified at T_2 as SO's of the highest level. In the occupational forms, 69% of those identified as new significant others at T_2 were assigned the lowest level of influence while only 2% were assigned the highest level.

TABLE 5

PERCENTAGE OF NEW EDUCATIONAL AND OCCUPATIONAL SIGNIFICANT OTHERS ENTERING AT T_2 FOR EACH LEVEL (N — 5942)

Significant Other Level	Type of significant other	
	Education	Occupation
	Percent	
1	65	69
2	25	22
3	7	7
4	3	2
Total	100	100

All of this seems substantial evidence of the stability of the SOE's. The low levels of the T_1—T_2 correlations tend to indicate that some change *is* going on during the 6-week interval between

the two administrations, but they do not indicate whether changes in the phenomenon or the basic instability of the test is the reason. If the SOE's were unstable, they ought to be equally unstable across all scores. If the phenomenon is changing, it ought to be much more likely to change at its lower levels than its upper. This evidence seems a strong indication that the latter is the case, and that the SOE's are doing a reasonably accurate job of measuring a shifting phenomenon.

There is another related way these data can be read, again illustrating a high degree of stability. If the test is not reliable, then the score of a significant other at T_2 should be random with regard to his score at T_1. A person receiving a score of 1 at T_1 should be no more likely to receive a 1 or 2 at T_2 than he is a 3 or 4. Table 6 shows that this is clearly not the case.

TABLE 6

PERCENTAGE OF EDUCATIONAL AND OCCUPATIONAL SIGNIFICANT OTHERS CHANGING 0, 1, 2, 3 AND 4 LEVELS (N = 5942)

Significant Other Level	Tipe of Significant others	
	Education	Occupation
	percent	
0	39	47
1	43	38
2	13	11
3	3	3
4	1	0.6
Total	100	100

As Table 6 shows, the score assigned at T_2 is very closely related to the score assigned at T_1, which is indicative of the kind of change one would expect to take place in the phenomenon itself over time rather than the kind of error one would be likely to find in an unreliable test. For education, 39% of the SO's received exactly the same score at T_1 and T_2, 43% were scored 1 point differently, 13% were scored 2 points

differently, 3% were scored 3 points differently, and only 1% was scored 4 points differently. For occupation, 47% were assigned exactly the same scores at T_1 and T_2, 38% were scored 1 point apart, 11% were scored 2 points apart, 3% were scored 3 points apart, and only 6/10 of one percent were scored 4 points apart.

This data is highly suggestive of the model presented in Figure 3. Figure 3 suggests that the individual is located in the field of others. Those most influential are represented as closest to Ego. Those outside the concentric circles are others whose influence is, at any given moment, too small to be detected by the SOE's. Movement of others across levels within the field of SO's and movement into and out the system is possible, and probably goes on constantly. Within the system, movement across several ranks is less likely than movement across only one or two. Those at the lowest levels are most likely to move out of the field during any given interval, and those outside who enter it are much more likely to enter it at lower levels than higher.

This is precisely how we ought to expect such a phenomenon to behave, and it represents the data presented here quite well. It would seem safe to conclude that the SOE's are accurate and reliable instruments which describe a fairly fluid phenomenon, but nevertheless a phenomenon which behaves quite lawfully.

As suggested earlier, the Expectation Elicitors are more straight-forward, and simpler ways to check validity and reliability are appropriate. Briefly, in the process of conductiving validity tests on questionnaires gathered from 109 high school students in another Wisconsin city and 898 of their significant others, a subsample of 100 significant others was drawn and retested by mail two months later. The results indicate substantial stability.

1) Definer's level of Occupational Expectation forms $r_{T1 : T2} = .91$;
2) Definer's level of Educational Expectation form $r_{T1 : T2} = .87$;
3) Model form occupation $r_{T1 : T2} = .72$; 4) Model form occupation: $r_{T1 : T2} = .85$.

Validity

There are three separate questions involved in assessing the validity of the significant other battery: 1) The validity of the Significant Other Elicitors, 2) The validity of the Expectation Elicitors, and 3) The validity of both sets of instruments in conjunction as a measure of the field of interpersonal influence in which individuals are located.

1. - Validity of the Significant Other Elicitors

Because of doubts about the validity of existing significant other measures, convergent validity testing was ruled out and a construct validity design adopted. Two measures of patterns of significant others were selected: 1) Total number of significant others for any individual, and 2) an index of significant other involvement constituted by the average level of significance of all significant others for any individual. (This purports to be a measure of the degree to which a person is involved with interpersonal influences). Hypotheses were then generated (within the limits of current theory) about (a) the relationship of these two variables to each other, (b) the variables upon which high and low values of these two measures may be seen to depend. (a) The relationship between number of significant others and mean involvement with significant others: At first glance it would seem that these two measures should be inversely related. If the amount of time a person has to spend with others is relatively fixed, then the larger the number of persons he spends it with, the less will be the average amount he spends on each. We do hypothesize a negative correlation between these variables, but not nearly a perfect one.

First of all, the amount of time and attention one devotes to interaction with others is not *absolutely* fixed; those persons with a higher « social » inclination may spend a greater proportion of their time interacting than others, and consequently may have both a higher total number of significant others as well as a higher average involvement with them. Secondly, there are both upper and lower bounds to the measure of significant other involvement (4 and 1 respectively). It is likely that, on the one hand, a person could invest the maximum amount of

attention measurable on this instrument on several people (perhaps 3 or 4) — that is, he could have 3 or 4 others at level 4 of significance. Reductions in total number of significant others beyond that level would no longer reduce the average level of influence. On the other end of the scale, a score of one is the lowest a significant other can attain on the Significant Other Elicitor instrument, and so no matter how many significant others are detected, each of them must occur at level one or higher, otherwise his name would not appear on the instrument at all. Thus the curve is negative over part of its slope but not all of it. Although we point a negative correlation between total number of significant others and index of involvement with significant others, (a) the relationship is probably curvilinear and thus depresses the Pearsonian *r* and (b) both measures are undoubtedly related to factors other than each other. Consequently we suggest a *slight* negative or zero relationship between index of significant other involvement and number of significant others. A valid significant other elicitor should detect such a relationship.

(b) Factors upon which values of Total Number of Significant Others and Involvement of Significant Others depend:

The basic assumption underlying this section is that interpersonal influence is positively related to interaction; that is, the more one exposes himself to interaction, the more he exposes himself to interpersonal influence. Consequently, two sets of variables are measured in this section: 1) amount of interaction, and 2) psychological disposition toward interaction. Theoretically, we can make the following hypotheses:

1) Increased interaction increases the available pool of potential significant others and consequently be positevely correlated with a valid measure of total number of significant others. But 2) simple increased interaction could be a consequence of either a greater amount of time spent in interpersonal behavior, or the same amount of time spent with more significant others. Consequently the correlation between number of interactions and a valid index of significant other involvement should be near zero or slightly negative. 3) Psychological predisposition toward interpersonal activities, insofar as it actually leads to increased interaction should be positively related to

total number of significant others, but 4) since a high psychological predisposition toward interaction should lead to more total time spent with more others, or more total time spent with the same others in some instances, phychological predisposition toward interaction should show a slight-to-moderate positive relationship to a valid index of involvement with significant others.

Factors which depend upon values of Total Number of Significant Others and Involvement of Significant Others:

Since significant others are by definition important sources of influence for the psychological characteristics of individuals, then differences in patterns of significant others should correspond to personality differences in the individual. It should be of real psychological consequence to the individual, for example, to have a great many significant others rather than a few, or to be deeply involved with interpersonal influence rather than only superficially so. We suspect that two psychological variables in particular should be so affected: 1) *dogmatism,* and 2 *personality adjustment.*

1) Dogmatism: We assume here that dogmatism refers to a rather rigidly delineated set of concepts available to the individual for the categorization of reality; consequently the dogmatic individual is relatively restricted in the alternative interpretations he can place on reality and in the alternative behaviors he can apply or allow to be applied to social situations. If reality is socially defined, such a view ought to be at least partially a consequence of a restricted environment of interpersonal influences. Hypothetically, increments in the number of significant others to which one is exposed should maximize the probability of receiving diverse interpretation of reality and consequently larger numbers of potential behaviors.

We hypothesize, then, a negative relationship between total number of significant others and dogmatism. It is conceivable that an individual may be involved with a sizeable number of significant others of nearly identical belief, however, and so the relationship should not be a perfect one. The degree of involvement with others ought not be related to dogmatism theoreti-

cally, but the negative relationship between Total Number of Significant Others and Involvement of Significant Others itself may be enough to generate a spurious positive correlation of low magnitude between dogmatism and involvement with significant others. 2) Personality Adjustment: If the categories one uses in order to classify and deal with social situations are products largely of interpersonal influences, then deficiencies in interpersonal influence should lead to deficient category systems, relative inability to cope with social situations, and personality maladjustment. Consequently we hypothesize a positive relationship between number of significant others and degree of personality adjustment. There ought to be a point, however, at which sufficient interpersonal influence has accrued so that the individual is capable of handling his environment adequately, and beyond which further accretions of significant others would not markedly improve adjustment. We hypothesize, then, a slight positive relationship between Total Number of Significant Others and personality adjustment.

The relationship between significant other involvement and personality adjustment is somewhat problematic, in that the relationship (of one), is more likely between total involvement and adjustment than *average* involvement. No hypothesis is made here.

Operationalization

1) Interaction: Interaction is measured by two separate instruments. The first is a simple two-item, open ended sociometric test. Item one is worded: « Of all the people in this room, who do you spend most of your time with? ». Item two is worded « Of all the people that you know, who do you spend most of your time with? ». Six blank spaces are provided for each. The total number of different persons mentioned on both items is summed.

The second instrument is somewhat less direct, and measures participation in extra curricular activities and leadership positions within those activities by (a) listing the usual

high school extra-curricular activities and asking the individual to check those in which he participates, and (b) asking the student to estimate his leadership activities as greater, the same or less than average. The assumption underlying this instrument is simply that participation in organizations necessarily entails interaction, and that leadership positions require greater amounts of interaction than simple membership.

2) Propensity toward Interaction: Propensity toward interaction is measured operationally by the Acceptance of Others scale, a 28 item Likert-type scale (Berger). The assumption underlying its use here is that the more favorable a person's attitude toward people in general, the more likely he is to interact.

2. - Validity of Expectation Elicitors

The Expectation Elicitors, both educational and occupational, model and definer, are designed to measure *level* of aspiration or attainment, as the case may be. (The distinction between model and definer forms is here unnecessary for our purposes, since definer forms are appropriate to some SO's and model forms to others. We are here dealing with the educational and occupational influence level of SO's, and either the model or definer form is included for any SO dipending on which is appropriate to him. In the event an SO is both model and definer, his definer form has been used). Thus, for our present purposes, there are two measures to be considered: an educational level instrument and an occupational level instrument. Of these two, one (the occupational) is based directly on an instrument of known validity (Haller & Miller). In its original fom (referring to a youth's aspirations for his own attainment, rather than another's expectations for his attainment) the behavior of the variable it measures is fairly well known theoretically. We know, for example, that levels of occupational and educational aspiration are positively correlated to a substantial degree. Consequently, if the Educational Level Expectation Elicitor (ELEE) is a valid instrument, its score should correlate fairly well with those of the Occupational Level Expectation Elicitor (OLEE).

Partly for validation purposes, two other instruments were also constructed. These other two, based on the relative value respondent's assign to each of the filter categories (e.g. « how important do you think are the *working condition of a job?* ») do not explicity deal with hierarchical levels, but rather with the criteria upon which such judgements rest. In this article these two instruments will be called expectation *choice elicitors*. Of the two, the Educational Choice Measure (ECM) almost necessarily *implies* such a hierarchy though, for the following reason: since there is little latitude for choice *within* any given educational level, an increase in the valuation placed on the filter categories defining education as an object would almost necessitate a higher level of educational aspiration. We should expect *some* correlation, then, of the ECM with a valid measure of ELEE. Within the occupational prestige hierarchy, however, there *is* a great deal of variation possible within any given occupational prestige level. Higher valuation placed upon the occupational filter categories for occupation would not imply higher scores on the Occupational Level Expectation Elicitor to such a great degree as higher valuation of educational filter categories implies higher ELEE scores. Consequently, a valid occupational choice measure (OCM) should not be so highly correlated with a valid measure of educational level expectations. We should assume then, that the two level measures (ELEE & OLEE) (since they measure relatively the same phenomenon) should intercorrelate highly. The two level vs level/choice measures (ELEE vs ECM; OLEE vs ECM) should correlate less highly; the level choice and choice only (ECM vs OCM) should correlate less still, and the two level and choice measures (ELEE vs OCM and OLEE vs OCM) should correlate least of all. The predicted relations among the four types of instruments should hold both for the expectations of others and the aspiration of youth (of most importance here are the validity checks for new instruments based upon rather novel concepts, i.e. V_1 through V_4 for SO's with V_3 and V_4 for youth).

Consequently, the following hypothesis may be generated:

$$H_0 : r_{12} = r_{13} = r_{23} = r_{34} = r_{24} = r_{14}$$

$$H_1 : r_{12} > r_{13} = r_{23} > r_{34} > r_{24} = r_{14}$$

Validity is indicated by rejecting H_o in favor of H_1. Where among:

Significant others	Youth
V_1 = ELEE	V_1 = Level of educational aspiration
V_2 = OLEE	V_2 = Level of occupational aspiration (OAS scores, Haller and Miller, 1963)
V_3 = ECM	V_3 = ECM for youth
V_4 = OCM	V_4 = OCM for youth

Joint Validity Measures:

The third validity question is the degree to which the WISOB SOE's and the WISOB EE's, working together, provide a valid measure of the location of individuals within a matrix of significant other influence.

Within the construct-validity framework necessary here, it is essential to assume that variations in the structure of interpersonal influence patterns will have psychological consequences for the individual, and that a valid measure of significant other influences will be associated with such psychological effects. Current theory allows us to predict certain consequences of different SO patterns (e.g., a correlation between the expectations of SO's and the attitudes of ego) but is not really strong enough to predict the magnitude of such relationships — immediate, contemporary significant other influences must compete against lesser sources of interpersonal influence (which, in sum, may be great), prior significant other influences, self-reflexive acts, etc. What this means in practical terms for our purposes is this: while we can predict that there should be correlations between the expectations of significant others and the attitudes of individuals, we don't know how strong they should be. Consequently the following basic research strategy was adopted:

Without predicting the magnitude of the relationships, it should be the case that a valid test administered to significant

others should correlate higher with a test *measuring the same variable* administered to the students than it should with a valid test measuring a different variable. The following four hypotheses may thus be generated.

H_o	H_1	
$r_{13} = r_{14}$	$r_{13} > r_{14}$	where V_1 = Student's Educational Aspirations
$r_{24} = r_{23}$	$r_{42} > r_{23}$	V_2 = Student's Occupational Aspirations
$r_{13} = r_{23}$	$r_{13} > r_{23}$	V_3 = Significant Others' Educational Expectations
$r_{24} = r_{14}$	$r_{24} > r_{14}$	V_4 = Significant Others' Occupational Expectations

Validity is indicated by rejection of the H_o in favor of H_1.

RESULTS:

1. - *Validity of the Significant other Elicitor* (3)

Nine hypotheses concerning the validity of the SOE's were made concerning the relationship of two variables yielded by the SOE's to other selected variables. Table 16 summarizes the predicted relationships Table 17 those observed:

As a comparison of Table 16 and Table 17 indicates, seven of the nine hypotheses are confirmed by the data at the .05 level.

(3) All the hypotheses in this section depend on the total number of SO's a person has. Yet the WISOB purports only to detect educational and occupational SO's. In order to test the hypothesis that number of educational & occupational SO's was related to number of SO's in general, a crude instrument, the Life Style Indicator, was developed. This instrument purports to measure the significant others a person has for defining his future social drinking and smoking behavior. These decisions, we reasoned, were unrelated to educational & occupational decision making, yet pervasive enough to be faced by all members of the sample. Although originally designed as an exact parallel to the Educational & Occupational instruments, objections by school administrators forced the deletion of one item (who do you know who is of legal age who uses alcohol? — a model for object item) Even so, the correlation between number of educational & occupational SO's and number of life-style SO'S is .740.

Two are not: the relationship between number of SO's and propensity toward interaction is essentially zero where a positive relation had been predicted, and the relationship between number of SO's and dogmatism is statistically not different from zero a the .05 level where a negative r had been predicted.

TABLE 7

SUMMARY OF HYPOTHESIZED RELATIONSHIPS FOR VALIDITY THE SIGNIFICANT OTHER ELICITERS

Patterns of Significant Others	Interaction and psychological disposition variables					
	Index of Interaction	Propensity toward Interaction	Dogmatism	Personality Adjustment	Number of Significant Others	Involvement with Significant Others
Number of Significant Others	Moderately Positive	Positive	Slightly Negative	Positive	(1.00)	Negative or near zero
Involvement with Significant Others	Zero or Negative	Slightly to Moderately Positive	Slightly Positive	Slightly Positive	Negative or near zero	(1.00)

As the reader will recall, however, we hypothesized that propensity toward interaction could *either* 1) increase the number of persons with whom one interacted, and thus increase the number of SO's, *or* 2) increase the amount of time spent interacting with the same others, thus increasing average involvement with SO's. Since 1) number of SO's and amount of interaction *are* intercorrelated ($r = + .365$) at the .05 level and since propensity toward interaction and involvement with SO's are intercorrelated ($r = + .290$) at the .05 level, this latter is apparently what is happening. This result, then, does not necessarily argue against the validity of the SOE's.

The Attitude Toward Others Test, however, (which is used here as the measure of propensity toward interaction) does not correlate significantly with *any* of the other 71 variables derived in the course of the significant other project, which is enough

to generate significant doubts about its validity. It should probably not be counted strongly as evidence in either direction.

The failure to appear of the negative relationship between dogmatism and number of significant others is not so easily accounted for, except that the Schulz Dogmatism Test correlates with only three of the 71 variables in the matrix, which casts some doubt on its validity as well. If both the Schulz Dogmatism Scale and the Attitude Toward Others Tests were removed from the analysis, five validation hypotheses, all confirmed, would remain. Nevertheless, even if all tests are included, only one of the nine correlations contradicts the validity of the SOE's, and at the .05 level, this might be expected by chance even in the event of perfect validity. It would seem, then, that the results strongly indicate that the SOE's are valid instruments for detecting significant others.

TABLE 8

OBSERVED RELATIONSHIPS FOR VALIDITY OF THE SIGNIFICANT OTHER ELICITORS (N — 109) *

Patterns of Significant Others	Interaction and psychological disposition variables					
	Index of Interaction	Propensity Toward Interaction	Dogmatism	Personality Adjustmen	Number of Significant Others	Involvemen with Significant Others
Number of Significant Others	.365	.048	.125	.425	(1.00)	.013
Involvement with Significant Others	.016	.290	.289	.289	.013	(1.00)

(*) For N = 109, correlations of + .190 are significantly different from 0 at the .05 level.

2. - *Validity of the Expectation Elicitors*:

The validity of the expectation instruments rests on the fact that a good deal is known about the theoretical behavior of some of the variables measured by the major expectation elicitors. Based on that knowledge, the following relationship among the instruments were predicted:

H_0 $r_{12} = r_{13} = r_{23} = r_{34} = r_{24} = r_{14}$

H_1 $r_{12} \geq r_{13} = r_{23} > r_{34} > r_{24} = r_{14}$

where V_1 = Educational Aspiration (for youth) or Expectation (for SO's)

V_2 = Occupational Aspiration (for youth) or Expectation (for SO's)

V_3 = Educational Choice (for both youth and SO's)

V_4 = Occupational Choice (for both youth and SO's)

Validity is indicated by the rejection of H_o in favor of H_1.

There are two basic ways in which these hypotheses can be tested. The expectation elicitors were administered first to the 100 students at West Bend High School to measure their own aspirations and attitudes. The expectation elicitors were subsequently administered to 899 of these students' significant others. The mean values of the expectations of the SO's of each student were then calculated. Consequently, two inequalities can be generated: one for the relationships among the tests administered to the students and a second for the relationships among the mean expectations of the significant others.

The results indicate that, in both cases, we are more than justified in rejecting the null hypothesis in favor of the alternative indicating validity (4).

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(4) Thees inequalities are simply shorthand ways of predicting orderings between pairs of correlation coefficients. The two inequalities represent 26 such distinct pair predictions. The probability of confirming *all* 25 of these hypothesis by chance when in fact $r_{12} = r_{13} = r_{23} = r_{34} = r_{24} = r_{14}$ is extremely remote.

For the students, the results show that

$$r_{12} \quad r_{13} \quad r_{23} \quad r_{34} \quad r_{24} \quad r_{14}$$
$$.652 > .379 \cong .413 > .106 > .051 \cong .034$$

For the significant others,

$$r_{12} \quad r_{13} \quad r_{23} \quad r_{34} \quad r_{24} \quad r_{14}$$
$$.723 > .482 \cong .338 > .157 > .064 \cong .078$$

The marked similarity between the two inequalities also indicates the similarity of the result when the instruments are administered to students and their SO's. Again, the evidence strongly suggests that the Expectation Elicitors are valid instruments for eliciting the expectations of SO's and demonstrates (U_3 and U_4) or confirms (U_1 and U_2) the validity of the instruments designed for the students themselves.

3. - *Results of Joint Validity Measures*:

The basic reasoning behind the joint validity tests was that a valid test administered to significant others should correlate higher with a valid test measuring the same variable administered to the students than it should with a valid test measuring a different variable. In this instance, that means that educational aspiration of youth should be more highly correlated with educational expectations of SO's than with the occupational expectation level of SO's than with his occupational aspirations, and *vice versa*. The fact that educational and occupational aspirations are highly intercorrelated ($r = .70$, approximately) seriously confounds this strategy, but nonetheless the results tend to support the hypotheses of validity.

The original hypotheses were

H_o	H_1	where
$r_{13} = r_{14}$	$r_{13} > r_{14}$	V_1 = Student's Level of Educational Aspiration
$r_{24} = r_{23}$	$r_{24} > r_{23}$	V_2 = Student's Level of Occupational Aspiration
$r_{13} = r_{23}$	$r_{13} > r_{23}$	V_3 = SO's Level of Educational Expectations
r_{24} r_{14}	$r_{24} > r_{14}$	V_4 = SO's Level of Occupational Expectations

Rejection of H_0 in favor of H_1 indicates validity.

The observed correlations yield the following result:

$$r_{13} = .720 > r_{14} = .646;\ r_{24} = .667 > r_{23} = 509;\ r_{13} = .720 > r_{23} = 509;$$
$$\text{and } r_{24} = .667 \geqq r_{14} = .646.$$

All results are in the direction predicted, although the first and fourth are not statistically significant at the .05 level. Although the data do not allow for statistical rejection of the first and fourth null hypothesis, the statistical probability of the sample yielding all four relationships as they are, given that there are no differences in the population, is a very small, particularly since both educational and occupational aspirations and educational and occupational expectations are so highly related. We should also expect some degree of non-spurious relationship between SO's educational expectations and ego's occupational aspirations, and vice versa, for the same reason. ($r = .652$, $r = .723$ respectively). Again, the general pattern of the results tends to indicate validity.

4. - *Summary:*

Three separate kinds of validity tests were employed: (1) tests of the validity of the significant other elicitors, (2) tests of the validity of the expectation elicitors, and (3) tests of both sets of instruments operating jointly. In the first section, nine hypotheses were generated concerning the relationship between two variables measured by the SOE's (number of significant others and involvement with significant others) and interaction, propensity toward interaction, dogmatism, personality adjustment and each other. Eight of the nine relationships were in the predicted direction; seven were statistically significant.

In the second section, 26 separate validity hypotheses (in the form of two inequalities) were generated, based on theoretically expected relationships among the variables measured by the expectation elicitors. Although tests for statistical significance were not, strictly speaking, appropriate, *all* the relationships were in the predicted ranges and directions.

In the third section, four hypotheses, based the theoretically expected interrelationship between SO's expectations and ego's aspirations were generated. All were in the direction predicted and two were statistically significant, although the tests for statistical significance were confounded by the degree to which educational and occupational aspirations were correlated.

In general, then, 39 validity hypotheses were generated. One was clearly disconfirmed, 38 were in the direction predicted, and in cases where results

were not statistically significant, clear mitigating circumstances can be found. Even though one may hold reservations about any of the tests individually the remarkably consistent pattern of the results taken together is too substantial to be ignored.

SUBSTANTIVE RESULTS:

Although the tests in the previous section show a substantial pattern of validity and reliability, it is important to understand that all the tests used were designed to circumvent the charge of circularity. Consequently, because we wanted to use the instrument to test the effect of SOI on attitudes, we could not use the relationship between SOI and attitudes to test the validity of the instrument. If it is true (as the data indicate) that the WISOB actually measures contemporary patterns of interpersonal influence, we are in a position perhaps for the first time to measure the actual effect of significant others on attitudes. The data are summarized in Table 9 and 10 (5).

TABLE 9

PARTIAL REGRESSION COEFFICIENTS FOR SELECTED VARIABLES ON EDUCATIONAL ASPIRATION LEVEL

Variable name	β	b	σβ	t
X_1 SES	.01	.00	.00	.19
X_2 Number of Extra-Curricular Activities	.08	.06	.07	.96
X_3 Perceived Leadership Activities	.21	.48	.19	2.76 *
X_4 I.Q.	—.02	.00	.01	—.22
X_5 Grade Point Average	.06	.13	.19	.71
X_6 Level of Occupational Aspiration	.42	.06	.01	5.07 *
X_7 Level of Occupational Expectation	—.03	.00	.02	—.28
X_8 Level of Educational Expectation	.29	.38	.14	2.75 *

(*) Significant @ .05 level w. 91 d.f.
$R^2 = .64$

Table 9 shows clearly that the three best predictors of educational aspirations are the individual's perceptions of his leadership aspirations are individual's perceptions of his leadership activities in scholastic affairs, and the edu-

(5) Data are from the West Bend Samples described earlier in the text.

cational expectations of his SO's as detected and measured by WISOB. The explained variance, 64%, is substantially greater than that detected in earlier studies using less sophisticated measures of SOI. (SHP). Table 10 shows that educational aspirations and the occupational expectations of ego's SO's, as measured by WISOB, are the most influential predictors of individual occupational aspiration. As in the case of Educational aspirations, the proportion et explained variance (56%) is the highest yet reported.

TABLE 10

PARTIAL REGRESSION COEFFICIENTS FOR SELECTED VARIABLES ON OCCUPATIONAL ASPIRATION LEVEL

Variable name	β	b	σβ	t
X_1 SES	.00	.03	.07	.44
X_2 Number of Extra-Curricular Activities	.05	.29	.50	.58
X_3 Perceived Leadership Activities	.00	.00	.15	.00
X_4 I. Q.	.06	.06	.09	.71
X_5 Grade Point Average	.08	—.01	1.40	—.80
X_6 Level of Educational Aspiration	.52	.35	.69	5.07 *
X_7 Level of Occupational Expectation	.41	.53	.15	3.59 *
X_8 Level of Educational Expectation	—.13	—.11	1.07	—1.09

(*) Significant @ .05 level w. 91 d.f.
$R^2 = .56$

In the light of the findings reported above, several conclusions seem warranted: 1) The WISOB SOE's provide a valid, reliable and economical means of detecting the educational and occupational significant others for any person; 2) the WISOB EE's provide a valid, reliable and economical measure of the expectations, aspirations and characteristics of significant others relevant to ego's own attitudes; 3) the WISOB as a unit validly reliably and economically detects and measures the patterns of contemporary education and occupation significant others for any person; 4) Significant Other Influence, as detected and measured by WISOB, appears to be the single most important variable yet discovered in exploring the educational and occupational aspirations of high school students.

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SPECIMEN QUESTIONS FROM EACH OF THE SECTIONS OF THE WISOB SIGNIFICANT OTHER ELICITORS

Type of Significant Other	Part of Attitude Affected	Filter Category of The Specimen Questions	Wording of the Specimen Question and its Response Categories
SOE for Occupation			
Definer	Object	Intrinsic Nature	*Who have you talked to* about *the kind of work* that different jobs require? FULL NAME ADDRESS RELATIONSHIP OCCUPATION
Model	Object	Extrinsic Nature	The kind of *working conditions* jobs like these have? FULL NAME ADDRESS RELATIONSHIP OCCUPATION
Definer	Self	Intrinsic Function	*Who have you spoken with* about what kinds of *purposes* (building, helping people, writing, etc.) are *right for you?* FULL NAME ADDRESS RELATIONSHIP OCCUPATION
Model	Self	Extrinsic Function	Who do you know who is *like you are* in being suited for jobs with the same kinds of *salary, social position,* and so forth? FULL NAME ADDRESS RELATIONSHIP OCCUPATION

Type of Significant Other	Part of Attitude Affected	Filter Category of The Specimen Questions	Wording of the Specimen Question and its Response Categories
SOE for Education			
Definer	Object	Intrinsic Nature	Who have you talked to about the kind of *work* that one does *in school after high school?* FULL NAME ADDRESS RELATIONSHIP OCCUPATION
Model	Object	Extrinsic Nature	*Who do you know* who has experienced the *social* life of education after high school such as meeting teachers, other students, extra-curricular activities, dating, etc.? FULL NAME ADDRESS RELATIONSHIP OCCUPATION
Definer	Self	Intrinsic Function	Who has *spoken to you* about *your self* as being the kind of person who is *able* to become a *success in later life* by going beyond high school? FULL NAME ADDRESS RELATIONSHIP OCCUPATION
Model	Self	Extrinsic Function	Who do you know who is *like you are* in being *able* to become a *better person* through education beyond high school? FULL NAME ADDRESS RELATIONSHIP OCCUPATION

(1) All response categories allow six lines of blanks for answers.

SIGNIFICANT OTHER EXPECTATION ELICITORS SPECIMEN QUESTIONS FROM EACH OF THE EIGHT WISOB

Form from Which Specimen Question was Taken	Wording of Specimen Question and its Response Alternatives
04 (1)	Of the jobs listed in this question, which is the *BEST ONE* you are *REALLY SURE HE CAN GET* when his *SCHOOLING IS OVER?* 1. ___ Lawyer 2. ___ Welfare worker for a city government 3. ___ United States representative in Congress 4. ___ Corporal in the Army 5. ___ United States Supreme Court Justice 6. ___ Night watchman 7. ___ Sociologist 8. ___ Policeman 9. ___ County agricultural agent 10. ___ Filling station attendant
E4 (1)	How much education would you like to see him have if *NOTHING* prevented him (or her) from having *AS MUCH AS HE (OR SHE) WANTED?* (Check one answer.) 1. ___ Quit school 2. ___ Finish high school 3. ___ Go to college or university (one that gives credit toward a Bachelor's Degree) 4. ___ Go to trade, business, secretarial or nursing school 5. ___ Get an advanced degree (masters, Ph. D., or professional such as law or medicine)
02 (1)	If you were *JUST OUT OF SCHOOL* and *LOOKING FOR A JOB*, which *ONE* of the jobs listed in this question is the *BEST ONE* you are *REALLY SURE YOU COULD GET?* 1. ___ Lawyer 2. ___ Welfare worker for a city government 3. ___ United States representative in Congress 4. ___ Corporal in the Army 5. ___ United States Supreme Court Justice 6. ___ Night watchaman 7. ___ Sociologist 8. ___ Policeman 9. ___ County agricultural agent 10. ___ Filling station attendant

Form from Which Specimen Question was Taken	Wording of Specimen Question and its Response Alternatives
E2	If you were a high school student, how much education would you like to have if NOTHING prevented you from getting AS MUCH AS YOU WANTED? (Check one answer.) 1. Quit school 2. Finish high school 3. Go to trade, business, secretarial or nursing school 4. Go to college or university (one that gives credit toward a Bachelor's Degree) 5. Get an advanced degree (masters, Ph. D., or professional such as law or medicine)
05 (1)	How important do you think it is for him (or her) to have a job which requires a certain *KIND OF WORK* (such as farming, building, treating patients, typing, etc.)? (circle one answer) ___ 1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Not important at all / Not too important / Somewhat important / Fairly important / Very important How important do you think education *beyond* high school is to his (or her) becoming a *SUCCESS in* life? (circle one answer) ___ 1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Not important at all / Not too important / Somewhat important / Fairly important / Very important How important do you think it is to have a job which requires a certain *KIND OF WORK* (such as farming, building, treating patients, typing, etc.)? (circle one answer) ___ 1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Not important at all / Not too important / Somewhat important / Fairly important / Very important

Form from Which Specimen Question was Taken	Wording of Specimen Question and its Response Alternatives
E1	How important do you think education *beyond* high school is for *SUCCESS* in life? (circle one answer) ___ 1. ___ 2. ___ 3. ___ 4. ___ 5. ___ Not important at all / Not too important / Somewhat important / Fairly important / Very important