LEVEL OF OCCUPATIONAL ASPIRATION: PROBLEMS IN ITS CONCEPTUALIZATION AND MEASUREMENT

Thesis for the Degree of M. A.
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Irwin William Miller, Jr.

1960

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By

Irwin William Miller, Jr.

A THESIS

Submitted to the College of Science and Arts
Michigan State University of Agriculture and
Applied Science in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS

Department of Psychology

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AN ABSTRACT

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Approved by: C F Wright

Although lacking systematic formulation, the concept of level of occupational aspiration (LOA) has been widely used in research. Techniques which have been evaluated appear to be ineffective measures of LOA. The purpose of this investigation was to evaluate empirically the Occupational Aspiration Scale (OAS), a new and easily administered eight-item multiple choice instrument designed to measure LOA.

There were two major aspects of the present investigation. The first involved an examination of the LOA concept and the techniques used to measure it. This examination was approached in the context of level of aspiration theory and research, and resulted in the identification of three central issues in the conceptualization of LOA. These were: (1) the stability of the measured LOA variable, (2) the internal structure of LOA, including the problem of differential response levels (non-factorial types) and/or factorial types of LOA, and (3) the "meaning" of LOA in terms of its relationship with other social-psychological variables. Characteristics of a measurement technique capable of empirically clarifying these issues were specified.

The second aspect involved empirical tests of the OAS based on the three conceptual issues. These OAS analyses were: (1) reliability, (2) internal structure, both non-factorial and factorial, and (3) correlation with other variables, including another measure of LOA. Data for these analyses were collected in school from two samples of seventeen-year-old high school students in Michigan, 442 in one sample and 117 in the other.

The results indicated that the OAS is a reliable measure of what is evidently a general LOA variable. A comparison of item mean scores indicated that LOA in terms of preference and "ideal" goals is higher than LOA in terms of expectation and "action" goals. However, the results of factor analyzing the item intercorrelations failed to produce orthogonal factors corresponding to either preference vs. expectation LOA or "ideal" vs. "action" goal LOA. Rather, one general factor accounting for 75 per cent of the total matrix variance was identified as high vs. low general LOA. An examination of the correlates of the OAS indicated that: (1) the OAS is equivalent to a free-response measure of general LOA, and (2) the OAS has relatively high correlations with variables judged to be behaviorally-relevant in terms of facilitating the occupational achievement process. However, over one-fourth of the OAS variance was unaccounted for by these variables.

It was concluded that the OAS is a more efficient measure of LOA than either the free-response techniques or existing multiple-choice instruments. It was suggested that the OAS may be useful in research concerned with the occupational achievement process and with the general area of social mobility. It may also be useful to occupational counselors. Finally, it was noted that future research should attempt to integrate the LOA concept into the existing body of social and psychological theory.

Approved by [signature]

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CHAPTER I

INTRODUCTION

An individual's occupation is one of his most readily observable and distinguishing characteristics. Not only is it a means of meeting certain economic needs, but it may also be a source of great personal satisfaction or dissatisfaction. Moreover, perhaps more than any other single activity, an individual's work represents his major social role in American society. For example, Darley and Hagenah (1955, p. 191) write:

> For it is our major thesis now that occupational choice and measured occupational interests reflect, in the vocabulary of the world of work, the value systems, the needs, and the motivations of individuals. These choices or measured interests are, in effect, the end product of individual development and the bridge by which a particular individual pattern of development crosses over to its major social role in our culture.

Statement of the Problem

Psychologists and sociologists have used various concepts in attempting to study the occupational decision-making and achievement processes of individuals and groups. One such concept is level of occupational aspiration, or LOA as we shall refer to it henceforth. The LOA concept has been used in terms of a variety of meanings and measurement situations. Nevertheless, the concept appears to lack clear theoretical and empirical formulation. One reason for this may be due to the fact that there have been few attempts to systematically design and evaluate a technique for measuring LOA.

The task of this thesis is to evaluate quantitatively the Occupational Aspiration Scale (OAS), a multiple-item instrument designed to assess LOA. This task involves two questions: (1) does the OAS measure LOA, and, (2) if so, how efficiently does it accomplish this? Before these questions can be answered, however, we should be able to specify the conceptual and measurement properties of the LOA variable. Lacking an available clear formulation of the concept, we shall attempt to examine it from two approaches. First, we shall consider the possibility of treating LOA as a special case of the level of aspiration paradigm of Lewin, et al. (1944). Secondly, we shall examine the direct application of the LOA concept and its measurement in research using it as a variable. The aim of these preliminary examinations is to identify several of the unresolved issues in the conceptualization and measurement of LOA. Once identified, these issues will allow us to specify the requirements for a measure of LOA capable of empirically clarifying the LOA concept. If the OAS instrument meets these requirements, then it may be evaluated not only in terms of certain formal psychometric properties, but also as a tool for clarifying the LOA concept.

Organization of the Thesis

The following chapter presents the preliminary examination of the LOA concept in terms of its conceptualization and measurement. The development of the OAS instrument and the specific procedures proposed for evaluating it are presented in Chapter III. Chapter IV presents the

results of the OAS reliability, internal structure, and correlation analyses. Finally, Chapter V summarizes the major findings of the thesis, concluding with an evaluation of the OAS and the variable it measures.

Orientation of the Thesis

Future research must ultimately decide the significance of the postulated level of occupational aspiration variable. The underlying premise of this investigation is that present theoretical knowledge of LOA and available measurements of it seem to suggest that an adequate evaluation of a new instrument designed to assess LOA must also involve an attempt to evaluate the concept itself, and that these two evaluations should proceed simultaneously.

CHAPTER II

THE CONCEPTUALIZATION AND MEASUREMENT OF LEVEL OF OCCUPATIONAL ASPIRATION

The purpose of this chapter is to examine the various meanings attached to the concept LOA, and to review the various techniques of measurement. The conceptualization has been achieved in a variety of ways, and with several different terms. In order to provide an analytical framework for this task, we shall first examine the concept of level of aspiration and its relation to an occupational goal-structure.

The Level of Aspiration Paradigm

In general, level of aspiration may be described in terms of goal levels. For example, Deutsch (1954) has defined level of aspiration as "the degree of difficulty of the goal toward which the person is striving." Lewin, et al. (1944), in applying the resultant weighted valence (RWV) model of Escalona, state that the level of aspiration will be the level of goal difficulty which has the maximum resultant positive valence.[1]

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[1] The resultant weighted valence at each level of goal difficulty is: $RWV = [\ (V_s \cdot P_s) - (V_f \cdot P_f)\ ]$, where:

RWV = resultant weighted valence of the goal for the individual
V_s = valence of success
P_s = subjective probability of success
V_f = valence of failure
P_f = subjective probability of failure

The RWV model distinguishes preference (in terms of "valence") and expectation (in terms of "subjective probability"). There is considerable evidence that level of aspiration in terms of preference is higher, as an average score, than is level of aspiration in terms of expectation (Lewin, et al., 1944; Irwin, 1951). In addition, this theory makes a distinction between "action" goals (the immediate, short-range goal of an action) and "ideal" goals (long-range goals which the subject may hope for). According to Lewin, et al. (1944), "it is the level of the action goal which is usually taken as the criterion for the level of aspiration for an individual at a given time." Thus, level of aspiration refers to the level of goal difficulty which the individual will undertake to achieve, and this level is influenced by preferences and expectations.

The applicability of the level of aspiration concept appears to be determined by the characteristics of the goals to which it is applied. Deutsch (1954) states:

> The concept of level of aspiration is relevant only when there is a perceived range of difficulty in the attainment of possible goals and there is a variation in valence among the goals along the range of difficulty.

Thus, the applicability of the level of aspiration paradigm to occupational goals seems to center on whether or not occupations have those characteristics specified by Deutsch. In addition, occupations would have to be empirically ordered by level of difficulty in order to measure LOA. We shall now examine the concept of an occupational hierarchy, its measurement by empirical scales, and the possibility of incorporating it in the level of aspiration paradigm.

The Occupational Goal-Structure

Various criteria and techniques for classifying occupations have been reviewed by Caplow (1954), Davies (1952), and Super, (1957). Some of the frequently used criteria are income, prestige or social-status, intelligence, interests, required skills and education, and personality. However, prestige or social status is probably the most used criterion for arranging occupations in a hierarchy. Moreover, several empirical scales of occupational prestige have been constructed during the past three decades, and the results of analyses of the rankings suggest that the prestige dimension is useful for research dealing with occupations. In this section, we shall examine the ranking of occupations by prestige and the relationship of these rankings to rankings based on other criteria.

Reliability of Prestige Ranks

Davies (1952) has examined the prestige rankings of occupations in terms of rater consensus, within group and between groups. He concludes that most studies indicate that there is a high degree of agreement between different groups of raters as well as among raters in the same group. He points out, however, that within groups consensus is higher at the extremes of the rankings than at the middle range of the rankings. Similarly, Centers (1953) has concluded that the class position of most occupations is unambiguous even though there is not complete unanimity among the raters. The stability of prestige rankings over time and between various modern industrial societies may be illustrated by referring to two sets of studies.

The first set, cited by Davies (1952), is a comparison of the ranking of occupations in 1925 with the ranking of the same ones in 1947. The first study was conducted by Counts, who asked respondents to rank a list of occupations "in the order of their social standing." Deeg and Patterson duplicated Count's study in 1947. They reported a correlation of +.97 between Count's rankings and their own.

The second set of studies compares the prestige rankings of 88 occupations obtained from a nationally representative sample of 2,920 American adults with the rankings of these same occupations obtained in five other countries. The first study, conducted by the National Opinion Research Center (NORC,1947) had a national sample of 2,920 adults fourteen years and over rank each of 90 occupations according to the following instructions:

> For each job mentioned, please pick out the statement that best gives your own personal opinion of the general standing that such a job has:
>
> 1. Excellent standing
> 2. Good standing
> 3. Average standing
> 4. Somewhat below average standing
> 5. Poor standing
> X. I don't know where to place that one

The occupations were assigned ranks by translating the percentage ratings on each of the jobs into a single general score.[2]

Inkeles and Rossi (1956) obtained rankings on 88 of these occupations in the U.S.S.R., Japan, Great Britain, New Zealand, and Germany. They found substantially high agreement among the various sets of rankings,

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[2]The resulting occupational ranks are presented in Chapter III along with a description of the Occupational Aspiration Scale.

and conclude: "this strongly suggests that there is a relatively invariable hierarchy of prestige associated with the industrial system. . . ."

Validity and Correlates of Prestige Ranks

Blau (1957) re-studied the responses of 1,077 males drawn from the National Opinion Research Center study in an attempt to determine whether the occupational status of the rater influenced his judgment of the relative status of occupations. He found widespread consensus in ratings among raters from different occupational strata. Blau concludes by writing:

> Men of higher status have generally stricter standards and give lower occupational ratings than those of lower status. But since these standards are applied rather uniformly to all occupations and people exhibit little bias in their ratings of their own occupational group, the rank order of occupational ratings is hardly affected by the rater's status.

Hatt (1950) has questioned the possibility of satisfactorily ranking the major occupations along a single dimension of status. He maintains that clear hierarchies can be established only within occupational families. However, he concludes that the theory and method of recent phenomenological estimates of occupational prestige status seem to meet the necessary requirements for an index of societal position more nearly than any other method currently available. The results of several studies reviewed by Super (1957) led him to conclude that occupational rankings made on the basis of social status correspond highly with rankings on income and intelligence.

The bases on which occupational prestige judgments are made have also been investigated. One study, that of the National Opinion Research Center (1947) discussed earlier, asked their respondents the following

question: "when you say that certain jobs have 'excellent standing,' what do you think is the one main thing about such jobs that gives this standing?" The four criteria receiving the highest percentage of responses were:

The job pays so well	18%
It serves humanity; it is an essential job	16%
Preparation requires much education, hard work and money	14%
The job carries social prestige	14%

Kahl (1957, p. 75), upon examining these findings, concluded:

> . . . in our culture, skill (ability plus education and training), authority, income, and prestige are a single meaningful complex. People who used different criteria ranked occupations in the same way. There is no point in wasting a lot of ingenuity trying to figure out which is most important: the significant fact is that the public sees them as fitting together.

Stefflre (1959) examined the inter-relationships of occupational rankings obtained on 10 criteria thought to be related to social status. These were: personal preference, prestige, value to community, control over other people, required education, job freedom, required intelligence, income, security, and opportunity for self-realization. The rankings for 20 occupations made by 59 female and 62 male high school juniors on the ten criteria were intercorrelated and then factor analyzed. Most of the intercorrelation for both groups was accounted for by one general factor. Stefflre concluded:

> This study suggests that high school students are either unable to clearly distinguish the various bases for the social status which they grant to occupations, or that all of the elements postulated as being important in status are in fact highly associated with each other.

Conclusions

It seems reasonable to conclude that occupations ranked by prestige represent a goal structure differentiated along a continuum of perceived valence. Moreover, rankings by prestige appear to agree substantially with rankings based on intelligence, ability, skill, and training. This suggests that ranking occupations by prestige results in their being ranked by difficulty also. Thus, the occupational prestige hierarchy appears to be an appropriate goal-structure for the level of aspiration paradigm. Logically, it is meaningful to use the term level of occupational aspiration.

In addition, the stability and validity of occupational prestige scales makes prestige ratings a desirable rating system for scoring LOA measures. Such measures could be standardized for purposes of comparing groups as well as individuals with respect to a relatively invariant reference. The predictive efficiency of LOA instruments would be increased since the relative positions of occupations would tend to remain stable over time. In conclusion, the possibility of clarifying the LOA concept by incorporating it in the general level of aspiration model seems justified. We shall now examine the various meanings attached to the LOA concept and the variety of techniques used in its measurement.

The Concept

Not all of the conceptualizations of LOA have been developed within the framework of the level of aspiration paradigm. For our purpose, we shall consider any concept and its corresponding measurement as LOA if its

result is to order individuals with respect to their behavior orientation to a hierarchy of occupational goals. In this section we shall examine the variety of meanings attached to the concept.

The first application of the level of aspiration concept to the occupational field was apparently made by Lewin (1936) who studied the relation between vocational choice and the feeling of success or failure in vocational achievement. May and Doob (1937) extended the level of aspiration concept to include motivational components:

> The level of aspiration . . . represents as accurate as possible an estimate of a person's urge or drive to achieve certain goals or ends as he sees them . . . . In all except grossly abnormal personalities these exact various and sundry discrepancies or gaps between the level of achievement and those of aspiration, or between what the individual now is or has and what he would like to be or have. It is our contention that motivation is a function of these discrepancies.

Lurie (1939), building on the conceptualization of May and Doob, made the first attempt to operationalize the concept LOA:

> . . . an individual's level of vocational aspiration at any given time is the Barr rating of his answer to the question, "What have you often thought that you would like to do for a living?" [3]

Apparently, Lurie considered LOA in terms of "Ideal" goals rather than at the level of "Action" goals, although Lewin, et al. (1944) had suggested that "Action" goals were the best estimate of level of aspiration. And the results of Lurie's study of 924 unemployed males seems to indicate that LOA in terms of "Ideal" goals is relatively independent of LOA in terms of "Action" goals. The correlation between his measure of LOA and the ratings of occupations which the subjects were currently attempting to enter

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[3] Barr ratings are the average intelligence of members of certain occupational groups.

was +.21. In general, subsequent interpretations of LOA continue to identify it with "ideal" goals and to give it motivational connotations.

For example, in the area of vocational interest measurement the major concern is with vocational preferences rather than plans or expectations. Two standardized vocational interest inventories contain sections or scales which attempt to measure the "level" of interests. These are the Occupational Level (OL) Scale of the Strong Vocational Interest Blank for Men (1946) and the Level of Interest (LI) section of the Lee-Thorpe Occupational Interest Inventory (1956_b).

Strong (1943, p. 44), discussing the meaning of the OL scale, speculates:

> The writer has a hunch that the general level of the half-dozen highest [interest] ratings is a rough measure of the amount of motivation that the individual has at his disposal for working hard and making a success. Men with low ratings have given the impression of being "drifters." This topic needs careful investigation.

Additional empirical research on the meaning of the OL scores resulted in a variety of interpretations, however. We shall briefly consider several of these.

Darley (1941, pp. 60-68) appears to be the first investigator to interpret the OL scale in terms of level of aspiration. His investigation, concerned with the clinical aspects of the OL scores, led him to conclude:

> Occupational Level, a quantitative statement of the eventual adult "level of aspiration," represents the degree to which the individual's total background has prepared him to seek the prestige and discharge the social responsibilities growing out of high income, professional status, recognition, or leadership in the community. . . .

He goes on, however, to extend the concept to include academic ability:

> . . . an excessively low occupational level score seems at present to be associated with lack of "staying power" or "survival power" in college competition. This hypothesis should be tested as quickly as research data accumulate, by careful studies of matched groups, since it is a phase of the "level of aspiration" and general motivational problems.

Finally, Darley goes on to speculate concerning the theoretical importance of LOA for the areas of vocational interest, motivation, and personality, and the need for systematic research:

> For in the last analysis, "interest" -- the thing that holds men willingly to a multitude of tasks of varying degrees of satisfaction within any one job -- is a powerful mainspring of behavior and therefore a powerful social force. Level of aspiration, motivation, and personality may all be hidden in the connotations surrounding our common usage of this word, and a systematic pattern of research may evoke a clearer understanding of these factors.

Kendall (1947) studied the relationship between the OL scores and several academic success and ability variables on a sample of 300 freshman college students. His conclusions, while agreeing with those of Strong and Darley, give little additional clarification of the concept:

> Without attempting to specify the precise nature of the variable measured by the OL scale, it would seem that the scale is measuring a variable related in part to academic ability . . . and in part to motivational factors.

However, Kendall found that the OL scores were only a crude indicator of academic success when academic ability was controlled. This led him to suggest:

> . . . if used with caution, OL scores at the extremes of the distribution should be useful to the counselor in making judgments concerning individual chances for scholastic success.

Further evidence concerning OL scores and academic achievement is reported in two studies by Ostrom (1949_{ab}). He reports a positive relationship

between OL scores and academic achievement at the college level but not at the high school level.

Additional attempts to interpret empirically the OL scale at a measure of drive is reported in a monograph by Barnett, et al. (1952). These investigations were prefaced by the following statement of the problem:

> What is the meaning of occupational level as measured by interest tests? Is having interests like those of executives a sign of motivation to strive to rise to high position? Or is occupational interest level simply an index of similarity of interests to those of men at various occupational levels, devoid of dynamics and unrelated to drive?

The authors compare OL scores obtained on various groups of school children with several measures of level of aspiration based on self-ratings, ratings by teachers and friends, and experimental ratings. In addition, school grades, intelligence, family social status and religion, college plans, occupational plans, and parental aspirations for the subjects are assessed. However, the monograph gives little information concerning measurement procedures and, hence, it is difficult to judge the comparability of various measures of drive, motivation, and aspiration. Although several of the findings are inconsistent, the authors conclude:

> The evidence now available warrants interpreting the occupational level score as a measure of status of interests: the OL score can indicate the socio-economic level at which a person should be able to find outlets for his interests. The evidence does not warrant interpreting the OL score as a measure of drive: it has not been demonstrated that the OL score can or cannot indicate how much a person will exert himself to rise on the occupational ladder or to succeed in his field of activity.

Attempts to clarify the meaning of the OL scores have apparently met with little success. What is even more important, these studies have

focused on the OL scale as such to the relative neglect of the LOA concept. It is questionable, for instance, whether measurements purporting to assess formal concepts such as level of aspiration, drive, or motivation are themselves valid criteria for these concepts. Is it legitimate to expect any measure of drive to correlate with any other measure of drive, irrespective of the kinds of drives involved? A wide range of interpretation still clouds the problem of clarifying the LOA concept by using the OL scale. For example, Darley and Hagenah (1955, pp. 117-118), after examining the data in the monograph discussed above, conclude that the OL scale is in fact a measure of LOA:

> There seems to be a certain disjunction between the findings of these three separate studies and the conclusions drawn in the monograph. From one standpoint, we find the actual data quite in accord with our general interpretation of the OL scale in the counseling situation. At the extremes, it is a meaningful index of the students' occupational aspirations and the attendant status correlates of occupations.

Thus, in the most recent edition of the manual for the Strong Vocational Interest Blank (SVIB) Strong (1959) cautions:

> Occupational level (OL) scores should also be interpreted with care since research has provided conflicting information as to their meaning.

The other standardized vocational interest inventory which incorporates a measure logically related to the LOA concept is the Occupational Interest Inventory (OII). Like the SVIB, the Level of Interest (LI) section of the OII assesses LOA <u>via</u> interests. Lee and Thorpe (1956_a) give this operational definition of the concept:

> The results [of the scale] indicate whether the interests are associated with routine tasks, with tasks requiring considerable skill, or with tasks requiring expert knowledge, skill, and judgment. The latter often involve supervisory and administrative skill.

The meaning attached to LOA here seems to be that of skill level.

An attempt to empirically validate this interpretation was made by Stefflre (1955). He administered the OII and an independent measure of LOA to 1,000 male high school seniors. The independent measure of LOA consisted of asking the subjects to name their "tentative vocational objectives" (e.g., "action" goals). The responses to this question were classified as either "white collar" or "manual" according to the Alba Edwards' scale. It was found that those aspiring to white collar occupations were significantly higher in LI scores than were those aspiring to manual occupations. Stefflre concluded:

> It can be concluded that the Level of Interest section of the Lee-Thorpe Occupational Interest Inventory is related to vocational aspiration. . . . This section of the test would appear to be a good rough index of the direction and extent of the student's aspiration as it will be expressed through the selection of a vocational objective.

The conceptualization of LOA, however, has also taken place during the course of research employing non-standardized measurements. We shall now consider some of the meanings attached to LOA by these investigations during the past ten years.

Stubbins (1950) has made a distinction between the specific meaning of occupational choice and the generic meaning. He considers LOA as a generic meaning in terms of the need for social status. Thus, for Stubbins, LOA is variously conceptualized as a "social status self-concept," a "prestige aspiration," and "a social status orientation." While analytically distinguishing interest and aspiration, he nevertheless views each as important factors in vocational counseling:

> Most fundamentally is the individual's choice determined by his vocational self-concept or his social status self-concept? Such a question is academic, for the self-concept is a unity. Nevertheless, certain concepts as abstractions of this unity are more adequate than others in predicting behavior. Thus, one of the earliest observations of the counselor's experience is that he encounters much less resistance in helping a client to effect a transfer from one vocational interest area to another than he does in getting the client to accept a change which involves a loss of status. It is not a question of interest or aspiration but of how much of each.

Kahl (1953) appears to view LOA simply in terms of occupational "ambitions" or "aims," and does not attempt to elaborate the concept in any analytical detail. However, he does suggest that parental pressure for the youth's social mobility is an important influence on LOA. Dynes (1956) also conceptualizes LOA as a factor influenced by relationships with the parents and characterizes it as a social-mobility orientation. A related view is found in Rosen (1959) who treats achievement motivation, certain value orientations, and educational-vocational aspiration levels as a complex which he calls the Achievement Syndrome.

Empey (1956) has made a distinction between occupational plans and occupational aspirations which parallels the distinction between expectations and preferences. In addition, he has classified LOA into two types. One of these is "absolute" LOA, which refers to the status level of a preferred occupation on the occupational hierarchy. When this standard is used, individuals are compared on LOA with respect to "a monolithic definition of occupational success." The "relative" type of LOA, on the other hand, takes into account the class level from which the individual establishes his occupational preference. This type is operationally defined as the difference between the status of the respondent's occupational preference and the

status of his father's occupation. Empey suggests that the "relative" type of LOA is a better indicator of social mobility orientation, since research has shown that "absolute" aspirations are positively correlated with social class levels.

Stephenson (1957) also conceptualizes LOA as a type of social mobility orientation. However, although maintaining the distinction between plan and aspiration, Stephenson considers LOA only as an "absolute" standard. LOA, as a mobility orientation:

> . . . refers to aspiration levels within the stratification system that may serve as points of motivation in competition for position in the social structure.

Unlike Empey, Stephenson found that occupational plans rather than aspirations are associated with class levels. After comparing the occupational plans and aspirations of youth from different social class levels, he concluded:

> . . . the mobility orientation pattern suggested is one in which aspirations are relatively unaffected by class and, hence, reflect the general cultural emphasis upon high goal orientations, while plans or expectations are more definitely class based and, hence, may reflect class differences in opportunity and general life chances.

Recently, Alexander, et al.(1959) applied the resultant weighted valence model of level of aspiration theory to occupational preference. They found that this model was an efficient predictor of LOA in terms of "Action" goals as well as "Ideal" goals. Apparently, they conceptualize LOA in terms of plans as well as preferences.

Summary

In general, the various meanings attached to the LOA concept have focused on the preference or "ideal" goal aspect of level of aspiration theory. Various attempts have been made to identify LOA as a motive or drive for achievement and social mobility. Most of these interpretations, while often based on empirical results, were largely speculative. We are led to conclude that the concept LOA has yet to be systematically clarified. This may be due largely to the fact that LOA has been measured by a variety of techniques. As Gardner (1940) has pointed out, "the meaning of the term level of aspiration bears an intimate relationship to the methods used in determining level of aspiration." In the following section we shall examine several of the techniques used to measure LOA.

The Measurements

The variety of meanings attached to the LOA concept is paralleled by an equal variety of measurement techniques. The purpose of this section is to examine these techniques and to attempt to isolate several central issues bearing on the problem of conceptual clarification. For convenience of future reference, the following set of terms is defined:

I. Standardized vs. unstandardized: this refers to whether the instrument has been analyzed and evaluated as a measurement over a range of research situations or whether the technique was designed merely for a specific investigation.

II. Direct vs. Indirect: this refers to whether the technique attempts to assess the explicit LOA of the individual or whether the LOA is

estimated and/or inferred from measurements designed to assess other than the LOA variable. (e.g., interest areas).

III. Single vs. Multiple-item designs: this refers to the number of unitary responses employed in assessing an individual's LOA.

IV. Expression Levels: this is related to III but analytically distinct. It concerns the two response levels of the level of aspiration model: preference (like-hope) and expectation. Concretely, the wording of the stimulus question is the major concern here.

V. Time Dimension: this is similar to IV, except that it refers to existence of question wording which specifies long-range goals or short-range goals (e.g., "ideal" goals or "action" goals).

VI. Free-response vs. Multiple-choice designs: this distinguishes LOA measurements which require the respondent to specify the goal from those which present alternatives from among which the respondent is asked to choose.

VII. Ordering of Responses: this refers to the rationale for scoring the responses, the type and range of criteria employed, etc.

Standardized Techniques

The Occupational Level (OL) scale of the Strong Vocational Interest Blank (SVIB) and the Level of Interest (LI) section of the Lee-Thorpe Occupational Interest Inventory appear to be the only published standardized measurements of LOA available. We shall first describe these measurements and then attempt to point out the inadequacy of these techniques for LOA measurement.

The development of the OL scale is described by Strong (1959):

> The occupational level (OL) scale was developed by identifying items which differentiated unskilled workers from the men-in-general group. A low score thus indicates interests similar to those of manual laborers; a high score means the person has responded to the items the way most business and professional men do.

The mechanics of the SVIB are based on preferential responses. Respondents are asked to check Like - Indifferent - Dislike (L-I-D) for a series of occupational titles, school subjects, amusements, activities, and characteristics of people. In addition, the respondent rates himself on a list of interests, preferences, personal abilities and characteristics. The OL scores are then derived from interest scores in the manner described by Strong.

Strong (1955, p. 127) presents the following reliability data for the OL scale:

Procedure	Sample	Reliability
Test - retest (5 years)	Seniors	.71
Test - retest (19 years)	Freshmen	.53
Test - retest (22 years)	Seniors	.57
Odd - even	---	.87

However, he also states that the predictive efficiency of the OL scale (in terms of occupational achievement) is poor when compared with predictions based on interest areas. Finally, the OL scale has not been shown to be equivalent to other measures of LOA. For example, Lee and Thorpe (1956_a) find a statistically non-significant correlation of +.13 between the OL scale and the LI scale of the OII based on a sample of sixty veterans.

The mechanics used in the OII to obtain LI scores are different from those of the SVIB. The OII has a separate section for the purpose of

measuring level of interest. This section is made up of 30 forced-choice triads, five triads for each of the six major interest fields assessed by the OII. Each triad consists of three statements concerning activities in the same interest area but differing with respect to the degree of skill involved. For example, the instructions and one triad from the LI section are as follows:

> Below you will find three activities under each number. You are to choose the one you prefer to do of the three in each group. Indicate your choice by marking the letter preceding the activity.
>
> 1
>
> Bl. Take temperatures, give blood tests, and administer hypodermics.
>
> Cl. Treat wounds, perform surgical operations, and help sick people get well.
>
> Al. Do haircutting, hairdressing, manicuring, or shampooing.

The alternatives are rated: A = low, B = average, C = high level of interest. Lee and Thorpe (1956_a) report a test - retest (one week interval) reliability coefficient of +.74 based on a sample of ninety-three twelfth-grade male students.

In summary, both the OL and LI measures are standardized, indirect, multiple-item measures of LOA with specified (although implicit in terms of occupational titles) goals. In the case of the OL, the respondent has a choice with respect to degree of preference (i.e., L-I-D). For the LI measure, the respondent has a choice with respect to activities preferred. Both, then, are restricted to the preference level of expression. Moreover, the criterion for scoring responses is different for the two measures. The OL scoring criterion is similarity of interests with respect to two criterion

groups: business and professional vs. manual labor. The LI scoring criterion is the degree of skill associated with the forced-choice alternatives. Both criteria are limited in range: for the OL, two levels are used; for the LI, three levels are employed. Finally, both measurements are present-oriented in that they specify neither short-range nor long-range goals.

In conclusion, the data examined seem to indicate that one or both of these measurements are inadequate measures of LOA. First, they do not correlate with each other. Second, neither one allows the respondent to explicitly set a level of aspiration in terms of occupational goals. Finally, both the OL and LI assess LOA indirectly via vocational interest areas. Again, it is questionable whether this is operationally equivalent to the individual's "setting the level of aspiration." For example, Super, in the monograph by Barnett, et al. (1952), has stated:

> It is not unreasonable to expect a measure of similarity of interest to measure only similarity of interest. Neither is it surprising to find that fields of interest have a dynamic which may not be shared by levels of interest, when the instrument used in measuring them both was originally designed to assess the former.

Non-Standardized Techniques

Many investigations employing the LOA concept have used non-standardized techniques for its measurement. Not all of these studies have described the design of the measurement. Of those that have, there is generally a lack of sophistication concerning the measuring instrument. This is manifested in three ways: (1) usually, a single question has been assumed as adequate, (2) these questions are worded in a variety of ways,

and (3) various scoring criteria have been used for ordering the responses. The only apparent continuity is the assumption that each of these different techniques is measuring the same concept, LOA. The following single-question measurements of LOA illustrate the variations in wording:

> What have you often thought that you would like to do for a living? (Lurie, 1939)
>
> If you had every opportunity to follow any career you wished but still had to work for a living, what occupation would you choose? (Stubbins, 1950)
>
> If you could have any job you wanted, as an adult, what would you like to do? (Barnett, et al.,1952)
>
> In the above question you have indicated what you actually plan to do. However, often times we have to plan to do things we would not do if circumstances were different. Therefore, the following question is asked. If you could do what you really wanted to do, what would you do? (Stephenson, 1957)

Several things about these questions are worth noting. First, all of them are restricted to the preference level of expression. Secondly, some specify occupations or jobs while others appear to request a response in terms of activities. Third, some are more specific than others with respect to the conditions under which the response is to be made. Finally, they are all free-response techniques rather than multiple choice.

The use of single-question measurements of LOA presents several problems. First, differences in the wording of the questions may establish different frames of reference for the respondent. That is, different questions may be interpreted differently. Different interpretations might involve different response dynamics. Consequently, the measurements may not be equivalent. If this is the case, then the blanket application of

the term LOA to all of these operations is misleading. Secondly, measurements of LOA based on single-question instruments are difficult to evaluate in terms of reliability and internal structure. In addition, such instruments do not allow an adequate assessment of the stability of the LOA variable over time. Finally, the use of single-question techniques involves problems of coding free-responses. Some of the respondents may reply in terms which cannot be coded: e.g., responses in terms of activities or interests rather than a specific occupation. Furthermore, it is probably true that not all individuals are aware of the full range of occupational alternatives. These considerations suggest that single-question measurements of LOA are relatively inefficient and unreliable. In fact, two empirical evaluations of multiple-question LOA measures tend to indicate that LOA may be more effectively measured by taking into account occupational plans and expectations as well as preferences.

The first study is that of Sewell (1955)[4] who administered the following questionnaire to 431 junior and senior high school boys:

1. The occupations which I have thought about going into are:
   a. _____
   b. _____
   c. _____
   d. _____
2. The occupation that I plan to follow is: _____
3. If I were absolutely free to go into any kind of work I wanted, my choice would be: _____
4. The type of work I would like to be doing 10 years from now is: _____

---

[4]Sewell, W. H. (1955, unpublished data) Jefferson county study: 1948-1955, co-sponsored by the University of Wisconsin and the Rockefeller Foundation.

Actual and interpolated prestige scores based on the NORC (1947) ratings were assigned to the responses classified in the following ways: (1) the prestige level of the highest occupational choice indicated in the answer to any of the questions, (2) the prestige level of the lowest occupational choice, indicated in the answer to any of the questions, (3) the prestige of the plan level was coded from the answer to question two, and (4) the free choice level was based on the response to question three. The Lee-Thorpe Occupational Interest Inventory (OII) was also administered to the same sample, the scores on the LI section being included in the analyses.

The highest, lowest, plan, and free choice-levels together with the LI section scores were intercorrelated and then factor analyzed. Three factors were extracted and rotated to an oblique solution. The first factor loaded relatively high on all of the choice levels and relatively low on the LI scores. It was interpreted as a general LOA factor. The second factor had its largest positive loading on the lowest choice level and its largest negative loading on the highest choice level. This factor was interpreted as "realistic" vs. "idealistic" LOA. The third factor was loaded substantially only on the LI scores.

Several conclusions are suggested by these results. First, various types of question wordings appear to contribute to the measurement of a general LOA variable. Secondly, responses coded in terms of highest and lowest choice levels appear to correspond factorially to the distinction between "ideal" goals and "action" goals found in level of aspiration theory. Finally, the LI measure shares little variance with the other measures of LOA. This means that, whatever it measures, it is not equivalent to the free-response instrument.

The other study which appears to support the use of multiple-question LOA measurements is that of Alexander, et al. (1959). Fifty college students were asked to rank ten occupational categories along scales of valence of success and valence of failure while assuming they were employed in each of the categories. In addition, they were asked to estimate the subjective probabilities of success and failure for each of the ten categories. This data was then used in the resultant weighted valence (RWV) model for estimating level of aspiration.

"Ideal" goals were assessed by having each student rank the ten occupational categories in the order of his preference. The "action" goals were determined by having the student list five current occupational intentions in the order of their preference. It was found that the RWV model had median correlations of +.74 with "ideal" goals and +.88 with "action" goals. The investigators concluded:

> . . . the resultant weighted valence is an extremely good predictor of occupational preference, even for "ideal" goals, and as such its merits should be investigated further in problems of occupational counseling.

The Criteria for Ordering LOA Responses

The socio-economic dimension of occupational classification (and its correlates) has been used most often in LOA measurement. A few studies, such as that of Lurie (1939), have used intelligence of occupational groups as the basis for ordering LOA responses. Nevertheless, most of these studies have overlooked two important considerations: 1) The range of classification, and 2) the representativeness or validity of the classifications.

The range of the criteria has ranged from dichotomies such as manual vs. white collar to more refined rankings such as the NORC (1947) prestige rankings of 90 occupations.

In several studies, such as Stubbins (1950), the LOA responses are ranked after they are obtained. This procedure no doubt reflects the fact that most existing scales of occupational ranks are limited in range. Hence, the investigator using the free-response approach is faced with two alternatives. He may completely ignore existing occupational scales and attempt to have a group of judges assign ratings to the responses, or he may use an existing scale as a frame of reference and interpolate those occupations not included in the existing scale. In either case, the range of responses so coded may not represent the full range of occupational alternatives. Equally important, unless two studies have used the same criteria and method of coding responses, an adequate comparison between groups on LOA is impossible.

On the other hand, the characteristics of the judges who assign ratings to the occupations or responses have varied. For example, Stubbins (1950) had professional colleagues rank the responses to his LOA measurement. At the present time, the NORC (1947) scale appears to be the only set of occupational rankings which is based on a large representative national sample in an attempt to gain a full range of relatively unbiased ratings.

Summary: Implications for Measuring LOA

While it is true that a few studies, such as that of Stubbins (1950), have attempted to determine the correlates of a particular LOA measurement, little or no attention has been directed to the problem of evaluating the measurement technique itself. This evaluation problem seems to us to involve making LOA a focal variable and to use the concrete instrument as a tool for clarifying the LOA concept. Moreover, no attempt has been made to design a method for measuring LOA which eliminates the difficulties of coding free responses, of determing reliability and stability, and at the same time of answering assumptions concerning the structure of the concept LOA. At the present time, it seems desirable that techniques for assessing LOA be considered primarily as tools for clarifying the concept and for integrating it into a broader theoretical base.

The state of present knowledge concerning the measurement and conceptualization of LOA suggests that the minimum requirements for a measurement design capable of clarifying the concept would be the following:

I. The measurement should be direct: respondents should publicly indicate their aims in terms which are operationally equivalent to "setting the level of aspiration." This is to be contrasted with indirect techniques where the level of aspiration is inferred from interest or activity areas.

II. The measurement should be multiple-item and include variations in question-wording which reflect different "expression levels" (e.g., preference and expectation) and goal-ranges (e.g., "action" and "ideal" goals). This requirement is based on the following considerations:

A. Determination of measurement reliability and stability of the variable.

B. Evaluation of the "internal structure" of the concept; e.g., are various question wordings equivalent measures of LOA.

C. Conceptualization of LOA as the generic rather than specific aspect of occupational choice. That is, in LOA assessment, we are not interested in specific occupational goals but in these only as they reflect the level and range of the occupational hierarchy toward which the individual is oriented.

III. The responses should be quantifiable: i.e., amenable to ordering by "levels." This suggests that open-ended or "free-response" techniques are inadequate, since the respondent may reply in terms which are not codable by ranking on the relevant dimension (e.g., prestige). One alternative is a multiple-choice approach for each question. This would tend to insure that each respondent is exposed to the same alternatives. Thus, responses would tend to be independent of knowledge of specific occupational alternatives.

IV. The scoring criteria should be objective, relatively unbiased, and represent a full-range of response possibilities. By objective we mean that the rankings of occupations are obtained from data other than the responses of the sample being measured. By relatively unbiased we mean that the rankings of occupations selected by the respondent are based on a group of judges whose characteristics are representative of the total population from among which groups or individuals are to be compared on LOA. A full range of response

possibilities means that rankings should be available over the entire range of the occupational hierarchy. In the case of multiple-choice design, this allows the respondent to choose from among the entire range of occupational levels.

V. The scoring criteria should approximate as closely as possible the notion of a differentiated goal structure along dimensions of perceived valence and perceived difficulty. This suggests that the criteria for ordering LOA responses should be based on the perceived hierarchy of occupations rather than on a hierarchy which is estimated from the actual or inherent characteristics of occupations or occupational groups. For example, the average intelligence of those employed in different occupations is one such actual or measured characteristic and hence does not seem to be appropriate as an LOA scoring criterion.

Conclusions

In this chapter, we have examined various approaches to the meaning and measurement of LOA and logically related concepts. We have found that the variety of interpretations regarding the concept LOA is paralleled by an equal variety of measurement techniques. The blanket application of the term LOA to all of these approaches is probably misleading. However, at the present time there is no clear theoretical basis for determining which concepts and measurements are LOA and which are not other than the general level of aspiration paradigm. Moreover, there is no clear evidence indicating that any two techniques are measuring the same variable.

The lack of a well articulated theory and adequate well-understood measurements for LOA pose serious problems for an evaluation of a measurement purporting to assess LOA. We have spelled out several problems in the measurement of LOA which we feel have been neglected and the solution of which may lead to a better understanding of the postulated LOA variable. In addition, we have specified what seem to us to be certain requirements for measuring LOA. These will provide a problem-context for the remainder of the thesis.

The task of the following chapter is to present the Occupational Aspiration Scale (OAS), its development, rationale, and scoring procedures. In addition, this chapter will specify the proposed empirical analyses of the OAS which will comprise the remainder of the thesis.

CHAPTER III

THE OCCUPATIONAL ASPIRATION SCALE: PROPOSED ANALYSIS

The task of this chapter is to describe the Occupational Aspiration Scale (OAS) as developed by A. O. Haller, and specify the proposed analyses. The description of the OAS includes a discussion of its development and rationale, its format, its administration and its scoring procedures. The chapter will then consider the problem of evaluating the OAS and discuss how the problems of LOA conceptualization and measurement are related to the proposed analyses of the OAS instrument.

Development and General Description

The OAS was designed as a measure of level of occupational aspiration. However, the OAS instrument is intended to overcome several difficulties of earlier LOA measuring instruments while at the same time attempting to incorporate certain conceptual components which seemed significant both on theoretical and empirical grounds.

The OAS is an eight item multiple-choice instrument which attempts to assess the "realistic" and the "idealistic" components of LOA, each at two career periods, initial (end of schooling) and mature (at age 30). The four possible combinations of these components are each assessed twice, thus giving a total of eight questions. The alternatives for each item consist of ten occupational titles drawn from among the ninety occupations ranked by the NORC (1947) study of the prestige of occupations (see Table 1).

Table 1

Summary of the Relation Between the NORC Occupational Prestige Scores and the OAS Format

NORC Rankings		OAS		
Occupation	Score	Item	Question	Score
1) U. S. Supreme Court Justice	96	1	R-ES	9
2) Physician	93	2	I-ES	9
3) State Governor	93	3	R-ES	9
4) Cabinet Member in Federal Government	92	4	I-ES	9
5) Diplomat in U. S. Foreign Service	92	5	R-30	9
6) Mayor of a large city	90	6	I-30	9
7) College professor	89	7	R-30	9
8) Scientist	89	8	I-30	9
9) U. S. Representative in Congress	89	1	R-ES	8
10) Banker	88	2	I-ES	8
11) (Government Scientist)*	88	-	---	-
12) County Judge	87	3	R-ES	8
13) Head of a department in a state government	87	4	I-ES	8
14) Minister [or]**	87	5	R-30	8
15) Priest	86			
16) Architect	86	6	I-30	8
17) Chemist	86	7	R-30	8
18) Dentist	86	8	I-30	8
19) Lawyer	86	1	R-ES	7
20) Member of the board of directors of a large corporation	86	2	I-ES	7
21) Nuclear physicist	86	3	R-ES	7
22) Psychologist	85	4	I-ES	7
23) Civil engineer	84	5	R-30	7
24) Airline pilot	83	6	I-30	7
25) Artist who paints pictures that are exhibited in galleries	83	7	R-30	7
26) Owner of a factory that employs about 100 people	82	8	I-30	7

*Titles in parentheses not used in the OAS.

[continued]

**Both are combined as a single alternative in the OAS.

[Continuation of Table 1]

NORC Rankings		OAS		
Occupation	Score	Item	Question	Score
27) Sociologist	82	1	R-ES	6
28) Accountant for a large business	81	2	I-ES	6
29) Biologist	81	3	R-ES	6
30) Musician in a symphony orchestra	81	4	I-ES	6
31) Author of novels	80	5	R-30	6
32) Captain in the army	80	6	I-30	6
33) Building contractor	79	7	R-30	6
34) (Economist)*	79	-	--	-
35) (Instructor in the public schools)*	79	-	--	-
36) Public school teacher	78	8	I-30	6
37) County agricultural agent	77	1	R-ES	5
38) Railroad engineer	77	2	I-ES	5
39) (Farm owner and operator)*	76	-	--	-
40) Official of an international labor union	75	3	R-ES	5
41) Radio announcer	75	4	I-ES	5
42) Newspaper columnist	74	5	R-30	5
43) Owner-operator of a printing shop	74	6	I-30	5
44) Electrician	73	7	R-30	5
45) Trained machinist	73	8	I-30	5
46) Welfare worker for a city government	73	1	R-ES	4
47) Undertaker	72	2	I-ES	4
48) Reporter on a daily newspaper	71	3	R-ES	4
49) Manager of a small store in a city	69	4	I-ES	4
50) Bookkeeper	68	5	R-30	4
51) Insurance agent	68	6	I-30	4
52) (Tenant farmer - one who owns livestock and machinery and manages the farm)*	68	-	--	-
53) Traveling salesman for a wholesale concern	68	7	R-30	4
54) Playground director	67	8	I-30	4
55) Policeman	67	1	R-ES	3
56) Railroad conductor	67	2	I-ES	3
57) Mail carrier	66	3	R-ES	3
58) Carpenter	65	4	I-ES	3

[continued]

*Not used in the OAS.

[Continuation of Table 1]

NORC Rankings		OAS		
Occupation	Score	Item	Question	Score
59) (Automobile repairman)*	63	-	--	-
60) Plumber	63	5	R-30	3
61) Garage mechanic	62	6	I-30	3
62) Local official of a labor union	62	7	R-30	3
63) Owner-operator of a lunch stand	62	8	I-30	3
64) Corporal in the army	60	1	R-ES	2
65) Machine operator in a factory	60	2	I-ES	2
66) Barber	59	3	R-ES	2
67) Clerk in a store	58	4	I-ES	2
68) (Fisherman who owns his own boat)*	58	-	--	-
69) Streetcar motorman	58	5	R-30	2
70) Milk route man	54	6	I-30	2
71) (Restaurant cook)*	54	-	--	-
72) Truck driver	54	7	R-30	2
73) Lumberjack	53	8	I-30	2
74) Filling station attendant	52	1	R-ES	1
75) Singer in a night club	52	2	I-ES	1
76) Farm hand	50	3	R-ES	1
77) Coal miner	49	4	I-ES	1
78) Taxi driver	49	5	R-30	1
79) Railroad section hand	48	6	I-30	1
80) Restaurant worker	48	7	R-30	1
81) Dock worker	47	8	I-30	1
82) Night watchman	47	1	R-ES	0
83) Clothes presser in a laundry	46	2	I-ES	0
84) Soda fountain clerk	45	3	R-ES	0
85) (Bartender)*	44	-	--	-
86) Janitor	44	4	I-ES	0
87) Share cropper - one who owns no livestock or equipment and does not manage farm	40	5	R-30	0
88) Garbage collector	35	6	I-30	0
89) Street sweeper	34	7	R-30	0
90) Shoe shiner	33	8	I-30	0

*Not used in the OAS.

Each occupation is presented for response only once in the eight items. Alternative responses for each item systematically span the entire range of occupational prestige, and are scored from zero to nine. Operationally, an item score of 9 indicates that the respondent has chosen an occupation from among the eight highest prestige occupations on the NORC scale, and an item score of 0 indicates that one of the eight lowest prestige occupations has been chosen. Thus, the total possible score for all eight items ranges from zero to seventy-two and this score is taken to represent a measure of the individual's general LOA. The OAS is designed to be used on the population of male high school students. Thus, the level and range of difficulty of the test items is oriented to subjects of this age and educational status. The OAS is a self-descriptive instrument, intended to be administered in a group testing situation.

One research project, that of Sewell (1955) in Jefferson County, Wisconsin, was especially influential on the design of the OAS.[5] This project investigated the educational and occupational plans and achievements of high-school youth. Some fifty-odd personality, performance, and social-situational variables were assessed on a sample of high school seniors in 1947. Seven years later, in 1955, the post-high school levels of educational and occupational achievement of these individuals were determined. The 1948 measurement of LOA was found to be the best single predictor both of number of years completed at college ($r = .52$) and the prestige level of occupational achievement attained by 1955 ($r = .46$). The correlations of the other variables with educational and occupational

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[5] Sewell, W. H. (1955, unpublished data), op. cit. (It was while working on this project that Haller became interested in the LOA variable.)

achievement were lower: e.g., college plans while in high school (.40, .17), high school grade point averages (.41, .34), Level of Interest section of the Occupational Interest Inventory (.38, .28), intelligence (.32, .20), and parental socio-economic status (.28, .28).

The measure of LOA on which these correlations are based was an index composed of the first orthogonal factor in a matrix of correlations of the prestige levels of the highest, lowest, free, and final occupational choices of the students.[6] This study suggested that long-range ("10 years from now") occupational goals were important when attempting effectively to measure level of occupational aspiration at the high school level.

The Jefferson County instrument, like most measures of LOA, had been based on the method of coding free-responses. This technique has several disadvantages: (1) considerable time and effort is involved, (2) subjects frequently fail to respond, (3) many responses lack sufficient specificity for coding, and (4) since only a small proportion of the total occupational titles have been empirically ranked, the prestige of most occupations is difficult to estimate.

The results of the Jefferson County study, and the problems encountered in attempting to measure LOA, led to the development of the OAS. It was designed to measure the LOA variable presumably assessed by the Jefferson County instrument while avoiding the problems encountered in the coding of free-responses.

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[6] In Chapter II, it was noted that a second factor in this instrument was tentatively identified as "idealistic" vs. "realistic" LOA.

Format

We shall attempt to describe the format of the OAS in the terms of the conceptual scheme of the level of aspiration paradigm. The wording of the stimulus-questions of the OAS in terms of expression levels and goal-ranges is presented in Table 2. Justification for this can be seen by

Table 2

OAS Format: Combination of Expression Levels and Goal-ranges for each of the Four Question-wordings

Expression Levels	Goals	
	Short-range ("action")	Long-range ("ideal")
	"Initial" (ES)	"Mature" (30)
Preference (Valence) "Idealistic" (I)	Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER? (2 and 4)	Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished? (6 and 8)
Expectation (Subjective-probability) "Realistic" (R)	Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER? (1 and 3)	Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD? (5 and 7)

examining the questions and their various wordings. Thus, "really sure you can get" corresponds closely to the concepts of expectation and "subjective probability." Similarly, "free to choose any of them you wished" resembles

the preference or "valence" level of expression. Moreover, the distinction between short-range ("action") goals and long-range ("ideal") goals parallels the terms "when your schooling is over" vs. "by the time you are 30 years old." However, it should be noted that this later analogy is based on the assumption that the OAS instrument is to be administered to the in-high-school population.

The numbers in parentheses in Table 2 refer to the sequence of the items using the four types of questions. The letters in parentheses refer to the expression levels and the goal-ranges of the questions. Thus, the questions are presented in the following sequence: R-ES, I-ES, R-ES, I-ES, R-30, I-30, R-30, and finally I-30. Although each of the questions is used twice, the alternatives for all eight items are different.

Each question is followed by a set of ten occupational titles. These titles were systematically selected from the ninety occupations ranked by the NORC study (see Table 1). The aim of this selection was to insure that, for each question, the full range of prestige alternatives would be presented while at the same time no occupation would be presented twice. Table 3 illustrates how this was done. While each set of alternatives does not span the same area of prestige ratings, they do tend to span the same range of occupational prestige. However, since several of the occupations in the NORC ratings have the same average prestige score, equality of range is only approximated.

Table 3

OAS Format: Distribution of NORC Occupations Among the OAS Items

NORC Occupations	OAS Items							
	1	2	3	4	5	6	7	8
(High prestige)								
1	*							
2		*						
3			*					
4				*				
5					*			
6						*		
7							*	
8								*
:	:	:	:	:	:	:	:	:
:								
82	*							
83		*						
84			*					
86				*				
87					*			
88						*		
89							*	
90								*
(Low Prestige)								

Ten of the ninety NORC occupations were not used in the OAS. There are several reasons for this. In the first place, several of the titles are clearly redundant and were included in the NORC study presumably as a check on the reliability of the ratings. Secondly, the titles "Minister" and "Priest" were combined as a single alternative "Minister or Priest." The reason for this is that if they were kept as separate alternatives, their selection would likely be differentially influenced on a religious

basis which would probably not be operative for any of the other alternatives. Moreover, both share the same NORC prestige score. Finally, the title of "Bartender" was excluded because evidence in the Jefferson County study indicated that the rating of "Bartender" is higher in the North Central states than in other areas. Finally, the prestige ranks for each set of ten alternatives were re-distributed in order to insure that the order of presentation would not correspond to the order of prestige.

Scoring

All of the eight items are scored in the same way. Table 4 illustrates the re-arrangement of prestige ranks and the corresponding scores for each of the ten alternatives. Each item is scored from zero to nine. The sum of all of the item scores is taken as the individual's

Table 4

Re-arrangement of Prestige Ranks for OAS Items

Alternative Order	Score
1	7
2	4
3	8
4	2
5	9
6	0
7	6
8	3
9	5
10	1

level of occupational aspiration as measured by the OAS. Thus, the total score obtainable on the OAS ranges from zero to seventy-two.

Administration

The OAS is intended to be administered in a group testing situation. The eight items are prefaced by a set of written instructions, which the tester reads over with the group at the beginning of the test period. These instructions and the first item are reproduced below:

THIS SET OF QUESTIONS CONCERNS YOUR INTEREST IN DIFFERENT KINDS OF JOBS. THERE ARE EIGHT QUESTIONS. EACH ONE ASKS YOU TO CHOOSE ONE JOB OUT OF TEN PRESENTED.

BE SURE YOUR NAME IS ON THE TOP OF THIS PAGE.

READ EACH QUESTION CAREFULLY. THEY ARE ALL DIFFERENT.

ANSWER EACH ONE THE BEST YOU CAN. DON'T OMIT ANY.

QUESTION 1. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

1. 1____Lawyer
1. 2____Welfare worker for a city government
1. 3____United States representative in Congress
1. 4____Corporal in the Army
1. 5____United States Supreme Court Justice
1. 6____Night watchman
1. 7____Sociologist
1. 8____Policeman
1. 9____County agricultural agent
1.10____Filling station attendant

It is emphasized that there are no "right" or "wrong" answers, and that the respondents are not bound by a time limit. Any questions concerning the

purpose of the test are answered by stating that the investigators are interested in the personal feeling of the respondents concerning various kinds of jobs. The meaning of various occupational titles is not described to the respondents should they request this during the administration of the OAS. If the respondents state that they are having difficulty with selecting an occupational alternative for any question, they are simply told to do the best they can. Thus, the testing situation is left as unstructured as possible.

In summary, the OAS is a direct, multiple-item, multiple-choice measurement of LOA, and includes question-wording at the preference and expectation levels as well as at the "action" and "ideal" goal-levels. The criterion for scoring responses to the occupational alternatives is based on an objective and relatively unbiased set of occupational prestige ranks over the full range of prestige. Thus, the goal-structure is one which is differentiated along dimensions of perceived valence and difficulty. This means that the OAS meets the requirements for measuring LOA as a special case of the general level of aspiration paradigm.

Statement of the Evaluative Problem

The LOA concept has been employed in a large number of studies. However, there seems to be a lack of agreement concerning both the meaning of the concept and the appropriate technique for measuring it. In addition, most of the LOA measurements lack information concerning their reliability, internal structure, and relation to other variables.

Certain limitations of single stimulus-question designs and the coding of free-responses have left several conceptual problems unanswered. Single questions preclude an adequate assessment of the stability of the variable as well as the reliability of any particular measurement of LOA. Also, single question designs do not afford a basis for assessing the internal structure of the measurement and the concept. Are the preference and expectation levels of expression in fact merely levels, or do they represent different response dynamics so that a measure of one does not assess the other? Similarly, what is the relationship of short-range ("action") goals and long-range ("ideal") goals, with respect to each other and with respect to the preference and expectation levels?

The coding of free responses usually results in normative data which are difficult to compare with data derived from studies employing different techniques. This is probably due, at least in part, to the fact that groups of respondents differ both with respect to their specific occupational interests and with respect to the range of occupational alternatives of which they are aware. Moreover, unless the coding of free-responses is based on a generally accepted set of rankings and interpolations thereof, the LOA measures will tend to reflect variations due to differing characteristics of the judges as well as differences in judgmental criteria.

Finally, there is a lack of a systematic theory of the LOA concept which might be employed by the researcher interested in constructing an empirical measure of it. Thus, the evaluation of any technique purporting to assess LOA is made difficult both from the theoretical side and from the

empirical side. Because of the precarious conceptual status of LOA and the lack of adequate measurements of it, we have no definite criterion (or criteria) for the evaluation of the OAS. Even if an unquestionable criterion were available, the use of a directly operational approach in evaluating an LOA measurement would not contribute to the task of formulating a theory about a generalized concept, LOA.

Proposed Analyses

The OAS will be evaluated by using it as a methodological tool for clarifying the concept LOA. Three conceptual problems have been isolated for analysis. First, there is the question of the stability of measured LOA over time. This problem involves assessing the reliability of the OAS instrument under conditions of single administrations and comparing this with estimates of reliability based on an intervening period of time between administrations. It would be expected that the results of these two reliability estimates would differ if the LOA variable tends to be unstable over time, assuming that the OAS measurement has substantial reliability.

Secondly, there is the question of the internal structure of the LOA concept as measured by the OAS. The OAS contains question-wordings which incorporate four analytical elements of the level of aspiration paradigm: (1) two expression levels (preference and expectation) and (2) two types of goals (short-range "action" goals and long-range "ideal" goals). In the terminology of the OAS, these correspond respectively to: (1) idealistic vs. realistic question wordings, and (2) end-of-schooling vs. age 30 goals. Research has indicated that level of

aspiration, in terms of average scores, is higher at the preference level than at the expectation level, and higher in terms of "ideal" goals than in terms of "action" goals. This will be examined with respect to LOA measurement by comparing the mean scores of appropriate items on the OAS. Moreover, LOA conceptualization and measurement has frequently suggested that these various elements also represent different variables or types of LOA. This will be examined by assessing the factorial structure of the OAS instrument.

Finally, the problem of interpreting the meaning of the LOA concept will be treated by examining the correlates of the OAS. First, the correlation between the OAS and another measure of LOA will be examined. Then the correlation of the OAS with other social-psychological variables will be examined for the purpose of determining which of these account for the variable measured by the OAS.

The following chapter describes the samples and procedures, and presents the results of the reliability, internal structure, and correlation analyses.

CHAPTER IV

RELIABILITY, INTERNAL STRUCTURE, and CORRELATES

The purpose of this chapter is to describe the samples from which the data were gathered, to specify the variables assessed, the treatment of the data for purposes of statistical analysis, and the procedures and the results of the reliability, internal structure, and correlation studies.

Samples and Data

The Lenawee County Sample

Most of the data used in the following analyses were gathered from all seventeen-year old boys in school in Lenawee County, Michigan, during the spring of 1957. The N of this sample is 442. This county and its respondents were chosen on the basis of considerations important for the purposes of the larger study of which this thesis is a part. Lenawee County contains within the same ecological area good farming, light industry, proximity to the Detroit industrial area, a representative sampling of farm, rural nonfarm and urban people, and a full range of the American social class levels. Seventeen year-olds were selected as subjects because of the need to study youth whose aspiration levels are fairly well crystallized, but who have not yet entered college or the labor market. Girls were omitted from the sample because of the probable differences in occupational orientations and because of the need to keep the sample small enough for certain sociometric clique analyses.

In addition to the OAS instrument, the following instruments were also administered to the Lenawee sample at the same time.

1. The 16 P. F. Test, Form B (1950)
2. Test of G - Culture Free-Scale 3A (Cattell and Cattell, 1950)
3. The California Test of Personality (Tiegs, et al., 1953)
4. The MSU Work Beliefs Check-List
5. A questionnaire on educational plans, occupational aspirations, family data, sociometric questions, and related personal data.

The non-standardized instruments (4 and 5) are presented in Appendix C. All of the data used in this thesis were converted to normalized T-score form (Edwards, 1954) and were punched on IBM cards in preparation for machine analysis.

The Mason Sample

The OAS was also administered to a group of junior and senior high school boys in Mason, Michigan,during the winter of 1958-1959. The N of this sample is 117. The Mason sample was selected for the test-retest reliability analysis of the OAS. It was chosen because the ecological area and the characteristics of the respondents were roughly similar to the Lenawee sample. Mason, like Lenawee County, is situated near an industrial center (Lansing, Michigan) and has a similar representation of rural and urban residents, class levels, and farming activity. The raw scores of the Mason OAS data are apparently normally distributed. For this reason they were not converted to T-score form for analysis. The Mason data were punched on IBM cards for machine analysis.

Tentative Norms

The frequency distributions and tentative norms for the OAS item and total scores are presented in Appendix A. These figures are based on the Lenawee sample. The observed total scores range from 2 to 65, with a mean of 36.20 and a standard deviation of 12.99. The distribution of total OAS scores appears to be approximately normal in shape and spans most of the range of the total possible scores of the OAS. The same form of the OAS administered to the Mason sample yields a similar mean and standard deviation of 37.24 and 11.70 respectively. An alternate form of the OAS, form Y, was used in the post-test administration for the test-retest reliability study on the Mason sample. Form Y, which will be described in the following section dealing with the reliability study, has a mean of 37.63 and a standard deviation of 11.90. Table 5 summarizes the descriptive statistics for both forms of the OAS administered to the two samples.

Table 5

Descriptive Statistics for the OAS

Sample	Form	Mean	SD	Range	SE_m
Lenawee N=441	X	36.20	12.99	63(2-65)	0.62
Mason pretest N=114	X	37.24	11.70	46(17-63)	1.10
Mason post-test N=94	Y	37.63	11.90	53(13-66)	1.23

Reliability

The problem of assessing the reliability of measurements has been discussed by Thurstone (1931), Cronbach (1949), and Tryon (1957), among others. However, there seems to be a lack of agreement concerning the types and meaning of reliability coefficients. We have taken the discussion of reliability in Technical Recommendations for Psychological Tests and Diagnostic Techniques (1954, pp. 28 ff.) as a guide for the terminology and procedure of this section. This manual distinguishes three types of reliability coefficients:

1) Coefficient of internal consistency: "We shall refer to a measure based on internal analysis of data obtained on a single trial of a test as a coefficient of internal consistency."

2) Coefficient of equivalence: "A correlation between scores from two forms given at essentially the same time we shall refer to as a coefficient of equivalence."

3) Coefficient of stability: "The correlation between test and retest, with an intervening period of time, is a coefficient of stability. Such a coefficient is also obtained when two forms of the test are given with an intervening period of time."

The two reliability analyses proposed for the OAS are based on coefficients of internal consistency and stability. However, there are several problems posed by the OAS format which do not allow the use of the odd-even technique for the estimate of internal consistency and which seem to suggest that the coefficient of stability should be determined by administering two equivalent forms of the OAS several months apart rather than administering the same form twice under the same conditions. These problems and appropriate solutions will be specified in the next section.

Construction of Equivalent Halves and Equivalent Forms of the OAS

If the OAS items were divided by the odd-even technique, one-half of the test would consist of all the "Realistic" items and the other half would consist of all the "Idealistic" items. Since the functional independence of these two expression levels is one of the problems for internal structure analyses, we do not wish to take the chance of biasing the reliability study by including this problem in the present analysis. However, since each of the four types of question wordings in the OAS is assessed twice, it was decided to split the OAS into two parallel halves, each of which contained all of the four possible question wordings. Both form X and form Y were split by this method, which is outlined in Table 6.

Table 6

Format for Dividing the OAS into Two Parallel Halves

	Two halves of the OAS and respective items	
Content Assessed*	A	B
R-ES	1	3
I-ES	2	4
R-30	5	7
I-30	6	8

*These abbreviations are defined in Chapter III.

Thus, the estimates of internal consistency will be represented by the correlation between two halves of the OAS which are equivalent in structure and in content. For each individual, the sum of scores for items 1, 2, 5, 6 represents the score on the "A" half of

the OAS, while the sum of scores for items 3, 4, 7, 8 represents the score on the "B" half of the OAS. Coefficients of internal consistency of the OAS were computed for the Lenawee sample and for both forms administered to the Mason sample.

A final characteristic of the OAS format dictates a slight modification of the usual method for assessing stability. This modification required the development of the alternative form Y, which we have mentioned before. The OAS has only eight items and eight corresponding responses. If the same form were administered to the same group with a period of only a few months intervening, it is highly probable that memory of previous responses would spuriously inflate the test-retest reliability correlation. On the other hand, it seemed desirable to retain the same sets of occupational alternatives for several reasons. Since eighty of the ninety NORC (1947) titles were used in the original form, it would be difficult to find eighty different occupational titles which covered the same range of occupational prestige and which, in addition, were based on the same or equivalent procedures employed in the NORC study. In short, substituting different but equivalent occupational titles in order to construct an alternate form of the OAS appeared to be too difficult, if not in fact undesirable. Instead, the following procedure was used to develop the alternate form which, while reducing the effect of learning on the retest responses, would also tend to insure that both forms share a maximum degree of content similarity.

Form Y of the OAS was constructed by simply rearranging the sets of response alternatives so that, for any corresponding question, a different

set of alternatives are presented. Table 7 illustrates the relationship between forms X and Y in terms of the rearrangement of the sets of alternatives. The sets of alternatives are lettered from A to H corresponding to the order of the items on form X with which they appear. Thus, form Y has the same format as form X except that the alternatives which appear with item one in form X appear with item eight in form Y, and so on until the alternatives which appear with item eight in form X appear with item one in form Y.

Table 7

Allocation of Response Alternatives in Constructing an Equivalent Form of the OAS

Sets of Alternatives	Content and Item Number*			
	R-ES	I-ES	R-30	I-30
A	X_1			Y_8
B		X_2	Y_7	
C	X_3			Y_6
D		X_4	Y_5	
E		Y_4	X_5	
F	Y_3			X_6
G		Y_2	X_7	
H	Y_1			X_8

*The X's and Y's refer to the respective OAS forms; the numerical subscript indicates the item presentation order. The content abreviations (e.g., R-ES) were defined in Chapter III.

Moreover, the same sequence of question wording is maintained for both forms. Form X and Y of the OAS are presented in Appendix A.

For the Lenawee sample, only the coefficient of internal consistency was computed on form X. This was done by summing the four item scores for each half of the OAS and then computing the product-moment correlation between the two halves for 441 persons in the sample. This same procedure was used for both form X and form Y on the Mason sample. For the coefficient of stability, the total score obtained on form X was correlated with the total score obtained on form Y administered approximately ten weeks later on the Mason sample. (These coefficients are presented in Table 10, page 59.) The means and standard deviations for each of the halves on both forms for each administration were computed. Using these data, the standard error of mean difference (SE_{md}) was computed for each of the paired-halves and also for each of the two forms for the Mason sample. It was thought that this would indicate how equivalent the halves were as far as their average scores and variances were concerned.

Equivalence of the Paired Halves and of the Two Forms

Table 8 summarizes the means, standard deviations, and standard error of the means for each of the three paired-halves. The standard

error of mean difference (SE_{md}) was computed for the case of paired observations to take into account the fact that the halves are correlated.[7]

Table 8

A Comparison of the Standard Error of Mean Differences for Paired-Halves of the OAS

	Sample, Form, and Half					
	Lenawee		Mason			
	X		X		Y	
Statistic	A	B	A	B	A	B
Mean	18.11	17.95	17.69	17.98	19.68	18.46
SD	6.73	6.81	6.39	6.40	6.10	6.66
SE_m	0.35	0.36	0.69	0.69	0.66	0.72
N	365	365	85	85	85	85
SE_{md}	0.28		0.52		0.62	
t	0.57		0.56		1.97	
d.f.	364		84		84	
P	>.05		>.05		>.05	

[7] See Edwards (1954), pp. 246-254 and p. 278 ff. The standard error of the difference between the means of paired observations is given by:

$SE_{md} = \sqrt{SE_{m1}^2 + SE_{m2}^2 - 2\,r\,SE_{m1}\,SE_{m2}}$, where:

SE_{m1} = the standard error of mean 1

SE_{m2} = the standard error of mean 2

r = the correlation coefficient between the pairs of observations, and:

$SE_m = \frac{SD}{\sqrt{n}}$, where SD = the estimated standard deviation of the population
n = number of observations

For the t test, $t = \frac{M_1 - M_2}{SE_{md}}$, with n - 1 degrees of freedom (d.f.)
where n = number of paired observations

A two-tailed t-test for the significance of the difference between the means of each paired half indicates that the null hypothesis of no significant difference must be accepted at the .05 level. An F-test[8] for the significance of differences between the variances for each paired-half indicates that none of the differences is significant at or beyond the .10 level. Thus, we may conclude that because the mean-scores and variances for each paired-half are not significantly different, the two halves of the OAS for both forms and for all administrations appear to be equivalent.

The same analysis was applied to the means and variances of Forms X and Y administered to the Mason sample. The total scores of eighty-five individuals who had completed both forms of the OAS were included in this analysis. Table 9 presents the means, standard deviations, and standard error of the means for each of the two forms of the OAS.

An F test for the significance of the difference between the variances of each form indicates that it is not significant at the .10 level. However, a t-test for the significance of the difference between the means indicates that the null hypothesis of no significant difference must be rejected at the .01 level.

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[8] In evaluating the difference between two means by the t test, it is implicitly assumed that the population variances from which the samples are drawn are equal. See Edwards (1954), pp. 271-273. The test for homogeneity of two variances is based upon the distribution of F:

$$F = \frac{SD_1^2}{SD_2^2}$$, where SD_1^2 is the larger of two independent estimates of the assumed common population variance and SD_2^2 is the smaller.

Table 9

Means, Standard Deviations, Standard Error of the Means, and Standard Error of Mean Difference for Two Forms of the OAS Based on the Total Score. Mason Sample Only

	OAS Forms	
Statistic	X	Y
Mean	35.67	38.14
SD	11.87	11.41
SE_m	1.66	1.53
N	85	85
SE_{md}	0.86	
	t = 2.87 d.f. = 84 P< .01	

In summary, paired-halves of the OAS for both forms and on both samples appear to be equivalent in terms of the means and variances of the scores for each half. On the other hand, the two forms of the OAS administered to the Mason sample approximately ten weeks apart, while equivalent in terms of the variance of their total scores, are not equivalent in terms of the mean of their total scores. Form Y, used in the post-test, has a significantly higher mean than does form X. This might be interpreted as meaning that the two forms are not equivalent. However, it also seems plausible to conclude that the slightly higher mean on form Y is simply a reflection of the so-called "practice effect" involved in repeatedly testing the same sample on the same trait.

Results of the Reliability Analyses

Table 10 summarizes the results of the several analyses of reliability. All coefficients were computed by the product-moment method. The coefficients obtained by correlating the equivalent-halves of the OAS were corrected by the Spearman-Brown Prophecy Formula in order to estimate the reliability of the eight item forms.

Table 10

Reliability Coefficients and Standard Errors of Measurement for the OAS

					Reliability	
Form	Sample*	SD**	Method	r_{ab}	r_{tt}	SE_M
X	Lenawee (N=365)	12.92	Parallel Halves	+.69	+.82***	5.48
X	Mason (N=85)	11.87	Parallel Halves	+.72	+.84***	4.75
Y	Mason (N=85)	11.41	Parallel Halves	+.60	+.75***	5.70
X and Y	Mason (N=85)	--	Equivalent Form: Test-Retest - 10 week interval	--	+.77	--

*Although complete OAS scores are available on 441 persons in the Lenawee sample, the Lenawee r_{ab} was computed in a matrix together with several other variables. Seventy-six individuals were dropped from the correlation analysis because they were lacking data on one or all of the other variables. Similarly, only 85 individuals in the Mason sample responded to all OAS items on both forms.

**The standard deviation is computed from the total raw score based on the entire eight items of the OAS.

***r_{tt} estimated from the Spearman-Brown Prophecy Formula: $r_{tt} = \frac{2r_{ab}}{1 + r_{ab}}$,

where r_{tt} = estimated reliability of eight items OAS, and

r_{ab} = computed correlation between parallel halves A and B of OAS.

See Edwards (1954), pp. 176-177.

An inspection of Table 10 shows that estimates of the reliability of the OAS range from .75 to .84. Although none of the coefficients are exceptionally high, they tend to fall within a narrow range of similarity and, taken as a group, yield a mean reliability estimate of .80.

The standard errors of measurement for each administration of the OAS are also presented in the last column of Table 10. Since reliability coefficients are sensitive to relative ranks of individuals within the group under consideration and to the spread of scores of the group, they indicate the reliability of the test for that group. The standard error of measurement (SE_M), however, is less sensitive to this variation since it takes into account both the reliability coefficient and the standard deviation for each group.[9] Moreover, the SE_M is more useful in directly evaluating the OAS scores of individual respondents. It is, in short, an estimate of the variation of observed scores around the "true" score of the individual and as such indicates how large a margin of error should be allowed for in the OAS scores.

Table 10 shows that estimates of the SE_M for the administrations of the OAS range from values of 4.75 to 5.70 with the mean SE_M equal to 5.31. The significance of these SE_M estimates depends to a large extent on the aims of the user of the OAS. For the present we shall simply present them

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[9] The formula is: $SE_M = SD\sqrt{1 - r_{tt}}$, where SD is the standard deviation of the obtained scores of a group and r_{tt} is the reliability coefficient for the same group. See Test Service Bulletin No. 50 (1956) for a discussion of the SE_M.

together with this statement from Test Service Bulletin No. 50 (1956) of the Psychological Corporation:

> It is not correct to say of an individual with a certain observed score that the odds are two out of three that his true score is within one SE_M of the score he got. But in the practical instance, we can use the SE_M in defining limits around the observed score within which we would be reasonably sure to find the true score. Whether the "reasonable limits" (as Professor Gulliksen has called them) will be one, two, or three times the SE_M will depend on the level of confidence the test user desires.

Summary

The results of the reliability study of the OAS indicate that several independent analyses exhibit substantial agreement with respect to reliability coefficients and standard error of measurement. It seems reasonably safe to conclude that the reliability of the OAS is about .80 and that the standard error of measurement is close to 5.30. Moreover, the coefficient of stability (.77) measured over a ten week interval agrees quite well with the coefficients of internal consistency (.75, .82, and .84). This allows us to make at least a tentative inference concerning the stability of the construct LOA as measured by the OAS.

That is, assuming that the reliability of the OAS instrument is .80 and taking into account the SE_M and the slight difference in group means between test and retest, the LOA of individuals appears to remain quite stable over a ten week period. If the variable LOA were unstable over time, one would expect the test-retest coefficient to be markedly lower than the coefficients of internal consistency which are based on virtually identical test situations and, as such, minimize the possible effects of factors other than the consistency of the measuring instrument.

However, the reliability coefficient tells us only that individuals tend to retain the same relative rank on the LOA variable in their group from one test situation to another. The standard error of measurement tells us more concerning observed individual variation. The SE_M estimates of the OAS suggest that classifying individuals into high, medium, and low LOA represents a fairly realistic appraisal of the accuracy of the OAS. Finer discriminations would only lead to pseudo-refinement which does not seem justified either by the OAS scoring system or by the reliability study.

Internal Structure

The analysis of the internal structure of the OAS involves two distinct conceptual problems. The first is that of differential response levels: i.e.,preference levels are thought to result in higher scores than expectation levels. This has been thought to be the case in both general level of aspiration research as well as LOA research. An additional aspect of this problem for the OAS is the relationship between long-range vs. short-range response levels.

The second conceptual problem to be considered here is that of the functional interdependence of various LOA question designs. That is, is LOA as measured by the OAS based on a single general dimension, or are there, as many have seemed to suggest, several relatively independent "kinds" of LOA: e.g., "Idealistic" vs. "Realistic." The first problem will be handled in terms of a profile analysis of the average item scores; the second problem will be treated in terms of orthogonal factor analyses.

Profile Analysis

The mean raw scores for each of the eight OAS items were computed on the Lenawee sample using form X. These item-means are presented in Table 11 and for convenience they are plotted in Figure 1. Since the odd-numbered items (1, 3, 5, 7) represent realistic questions and the even-numbered items (2, 4, 6, 8) represent idealistic questions, the results consistently indicate that idealistic (preference) responses, in terms of average scores, are higher than realistic (expectation) responses. This holds not only for adjacent items (e.g., 1 and 2) but also for any pair of realistic-idealistic items.

Table 11

Means for the OAS Item Scores (N=441)

Realistic Level		Idealistic Level	
Item	Mean	Item	Mean
1	3.05	2	5.64
3	2.93	4	4.60
5	3.95	6	5.86
7	4.47	8	5.98

An inspection of figure 1 shows that there is also a tendency for long-range ("ideal") goals to have higher average levels than short-range ("action") goals. This pattern, however, is not as clear as the pattern of average level of preference and expectation responses.[10]

[10]The average OAS item scores for forms X and Y, administered to the Mason sample, are presented in Appendix B. The form X profile is similar to the profile on the Lenawee sample. However, this is not the case with form Y.

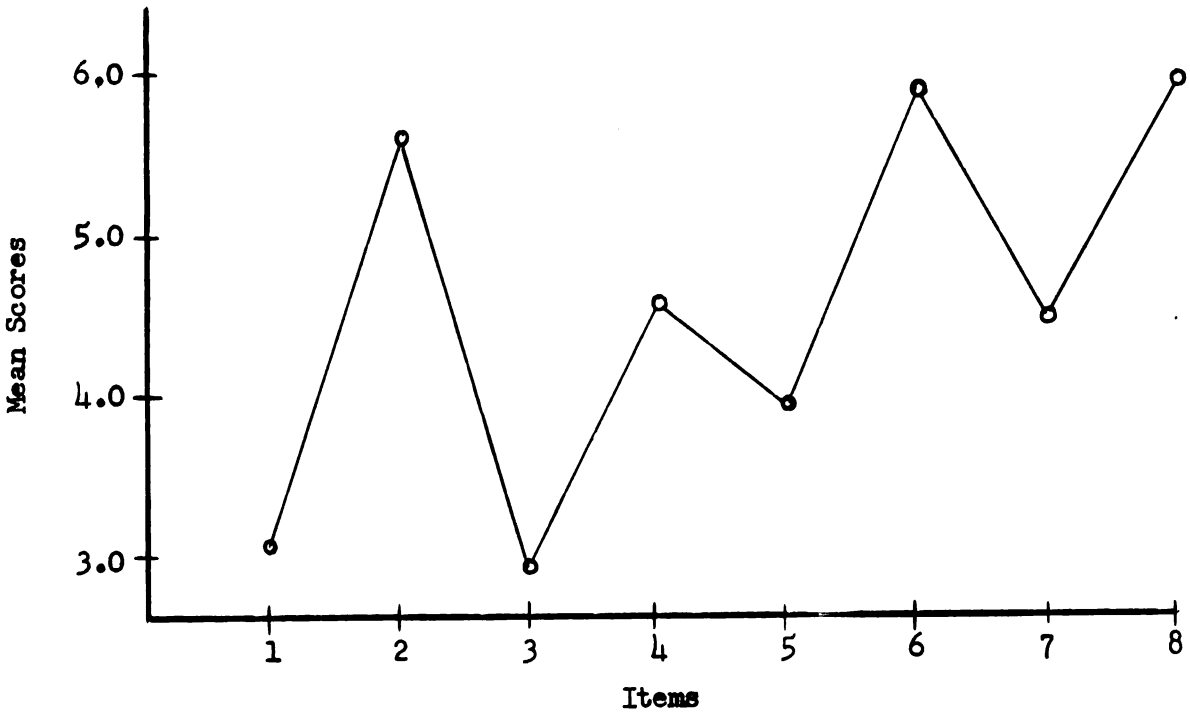

FIGURE 1: PROFILE OF OAS ITEM MEAN SCORES

Nevertheless, both the expectation-preference pattern and the short-range ("action")-long-range ("ideal") goal pattern seem to be consistent with the observations of level of aspiration research.

Factorial Structure

The raw scores on each of the eight items of the OAS for the Lenawee sample (N=441) were converted to T-score form, and they were then inter-correlated by the Pearson product-moment method. Table 12 presents the OAS item inter-correlation matrix.

Table 12

OAS Item Correlation Matrix (N=441)*

	Item							
	1	2	3	4	5	6	7	8
1. R-ES	(45)	24	40	37	27	26	31	28
2. I-ES		(47)	37	36	29	36	27	40
3. R-ES			(56)	42	44	34	42	43
4. I-ES				(54)	39	42	35	46
5. R-30					(53)	45	43	34
6. I-30						(52)	39	38
7. R-30							(51)	40
8. I-30								(54)

*Decimal points omitted. All signs are positive, all coefficients are significant at the .01 level. Figures in parentheses are the estimated communalities. Item abbreviations (e.g., R-ES) were defined in Chapter III.

The correlation matrix was factored by the principal-axes method (Cattell, 1952, pp. 129 ff.) using the Guttman (1958) technique for estimating communalities. The three largest factors, accounting for 75, 8, and 7% of the total matrix variance respectively, were extracted and rotated to approximate orthogonal simple structure by means of the "Quartimax Method" (Neuhaus and Wrigley, 1954). The rotated loadings, principal-axes loadings, and communalities for the eight items are shown in Table 13.

Table 13

Factor Matrices and Communalities* for the OAS Items (N=441)

Item	Quartimax Loadings I	Quartimax Loadings II	Quartimax Loadings III	Principal-Axes Loadings I	Principal-Axes Loadings II	Principal-Axes Loadings III	h^2
1. R-ES	50	02	40	51	-04	38	41
2. I-ES	55	-33	-08	55	-29	-16	42
3. R-ES	67	02	24	68	00	21	51
4. I-ES	66	-14	07	67	-14	01	47
5. R-30	65	27	-11	64	31	-08	50
6. I-30	64	05	-25	63	11	-26	48
7. R-30	63	23	01	62	24	03	45
8. I-30	65	-23	-02	65	-21	-09	48
% Total Variance:	75	8	7	75	8	7	

*Decimal points omitted. All figures are positive unless otherwise indicated.

All eight OAS items have moderately high loadings on the first rotated factor. The highest positive loadings on the second factor are exhibited by the two R-30 items, while the highest negative loadings are held by item two (I-ES) and item eight (I-30). The third rotated factor is loaded by items one and three (both R-ES).

The first rotated factor may tentatively be labeled as high vs. low general LOA, since it is loaded uniformly by all eight items. The second and third factors are more difficult to interpret. If anything, factor II appears to be an R-30 factor, while factor III appears to be an R-ES factor. However, neither of these two factors is amenable to a clear-

cut interpretation which is consistent with the remaining items. Moreover, in terms of the conceptual issues stated earlier, the results of this factor analysis fail to reveal a systematic set of factors corresponding to independent dimensions of "realism" (expectation) and "idealism" (preference).

Summary

A profile analysis of the mean scores of the OAS items has tended to substantiate the observation that average responses in terms of preference are higher than average responses in terms of expectation. In addition, there was a tendency for long-range ("ideal") goals to have average response levels higher than the response levels of short-range ("action") goals. Both of these findings are congruent with level of aspiration research. A factor analysis of item intercorrelations has revealed the existence of a large general LOA factor, and two small factors which are interpretable as an orientation to realistic (expectation) short-range ("action") goals and an orientation to realistic (expectation) long-range ("ideal") goals. However, no factors were found which correspond to the realistic (expectation) vs. idealistic (preference) level distinction.

The OAS, then, appears to measure primarily a general LOA variable with each item contributing rather uniformly to this variable. Thus, the total OAS score (the unweighted sum of the item scores) may be used as an estimate of the individual's general LOA. Finally, since the two additional factors are relatively small, it is questionable whether measures based on them would be useful.

Because the general LOA factor appears to be the major variable (accounting for 75 percent of the total matrix variance) assessed by the

OAS,[11] it would be worthwhile to examine in more detail the "meaning" of the variable. The next section will attempt to describe the differential correlates of the OAS total score with the aim of putting some conceptual "flesh" on the "skeleton" of internal structure.

Correlates

Up to this point, we have avoided speaking of the "validity" of the OAS. One reason for this, of course, is that we have little theoretical knowledge concerning what empirical qualities a measurement of LOA should exhibit. Moreover, a predictive criterion in terms of level of occupational achievement is not possible at this time. Finally, the question of what constitutes "validity" and the operations involved in determining it has not been answered to the general satisfaction of many writers. For

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[11] Since factorial structure is a function of both the instrument and the sample of respondents, both forms of the OAS administered to the Mason sample were also factor analyzed by the above procedure. The item intercorrelations and the factor matrices are presented in Appendix B. Results of this analysis are substantially in agreement with the above results; i.e., all eight OAS items appear to contribute rather uniformly to a moderately large general factor. Moreover, a factor analysis of both forms together (also presented in Appendix B) suggests that two additional conclusions supporting the reliability and internal structure studies are warranted. This latter analysis indicates that both forms of the OAS administered to the Mason sample share a common orthogonal factor. For the reliability study, this suggests that the correlation of +.77 between the total scores of both forms is largely due to this common factor. In terms of internal structure, this lends tentative support to the conclusion that the general factors isolated separately for each form of the OAS are in fact functionally the same.

example, Cronbach (1949, pp. 48ff.) distinguishes three kinds of validity: logical, empirical, and factorial. Logical validity and empirical validity appear to correspond to content or face validity and predictive validity, respectively. Factorial validity means that the instrument measures just one trait or variable. (The results of the factor analysis of the OAS tend to suggest that it has substantial factorial validity, but the results are not completely unambiguous.) Subsequently, Cronbach and Meehl (1955, p. 282) introduced the notion of "construct validity." They write:

> Construct validity must be investigated whenever no criterion or universe of content is accepted as entirely adequate to define the quality to be measured. Determining what psychological constructs account for test performance is desirable for almost any test.

The authors point out that the construct validity approach implies a critical view of the criterion: (1) The investigator may have an unquestionable criterion, but he does not wish to use a directly operational approach because he is interested in building theory about a generalized construct; (2) often, the criterion may be no more valid than the test under evaluation. Peak (1953, p. 288) seems to share a similar view of validation studies:

> . . . It is useful to know that a questionnaire on attitude toward religion is answered differently by those who are church members and those who are not, but before such a concept can have any systematic significance, other steps are necessary. A theory about the structure and content of the attitude process and its interrelations with other processes in the determination of behavior must be worked out, and studies must be made to discover whether the hypotheses are supported. . . . The meaning of any measured process is given not only by a description of operations used in isolating it from other processes and in assigning some index of quantity but also by knowledge of its influence on other processes and their influence on it. Con-

sequently, to establish the validity of a construct and of the defining measures is to conduct experimental investigations.

The Technical Recommendations (1954, pp. 13-14) manual recognizes four types of validity: content validity, predictive validity, concurrent validity, and construct validity:

a. Content validity is evaluated by showing how well the content of the test samples the class of situations or subject matter about which conclusions are to be drawn.

b. Predictive validity is evaluated by showing how well predictions made from the test are confirmed by evidence gathered at some subsequent time.

c. Concurrent validity is evaluated by showing how well test scores correspond to measures of concurrent criterion performance or status.

d. Construct validity is evaluated by investigating what psychological qualities a test measures, i.e., by demonstrating that certain explanatory constructs account to some degree for performance on the test.

It seems desirable, however, to take a somewhat more flexible approach to the tasks of evaluating the OAS and of clarifying the concept LOA than is suggested by a rigorous adherence to any one or all of these approaches to validation. The task of this section is to identify the major correlates of the OAS. This approach is similar to the orientation of construct validity; however, it is even more preliminary in that neither the concept LOA nor the OAS instrument is the object of validation. We are concerned only with describing empirically the variable assessed by the OAS. This task will be approached in terms of: (1) Correlational and factorial analyses of the relation between the OAS and another instrument for measuring LOA, and (2) a correlation analysis of the relation between the OAS scores and several other presumably significant social-psychological variables.

Relation to Another Measure of LOA

In addition to the OAS, another LOA instrument was administered to the Lenawee sample. This instrument is the same as that used by Sewell in the Jefferson County study (discussed in Chapter II) with the following exception: in question four, the words "10 years from now" are replaced by "by the time I am 30 years old." The coding procedure is identical with the Wisconsin study.[12] There are five prestige scores for each respondent: (1) the prestige level of the highest occupational choice indicated in the answer to any one of the questions, (2) the prestige level of the lowest occupational choice indicated in the answer to any of the questions, (3) the prestige of the plan level was coded from the answer to question two, (4) the free choice level was based on the response to question three, and (5) the maturity choice level was based on the answer to question four. These question wordings are reproduced below.

1. The Occupations Which I Have Thought About Going Into Are:

   1. _____ 2. _____

   3. _____ 4. _____

2. The Occupation That I Plan to Follow is: _____ (Indicate particular type of job.)

3. If I Were Absolutely Free To Go Into Any Kind of Work I Wanted, My Choice Would Be: _____

4. The Type of Work I Would Like To Be Doing When I am 30 Years Old Is: _____

[12] Responses were coded in terms of actual and interpolated NORC ratings of occupational prestige.

Correlation Analysis

The total OAS score and the mean score of the five prestige scores obtained on the free-response instrument by each respondent were correlated by the product-moment method on a useable sample of 365.[13] The correlation was +.62. Thus, it seems to be reasonable to conclude that both the OAS and another LOA instrument share a substantial amount of common variance which we have identified as general LOA. However, this correlation does not tell us which items in each instrument contribute to this common variance, or if the factorial structure of the free-response measurement is similar to the factorial structure of the OAS.

As an aid to interpreting the meaning of the variable measured by the OAS, two additional analyses were done. The five scores on the free-response instrument (highest, lowest, plan, free, and mature) and the eight OAS scores were intercorrelated by the product-moment method based on the useable sample of 365 respondents. These intercorrelations and the communality estimates are presented in Table 14. Two separate principal axes factor analyses were performed, using the highest correlation in each column as an estimate of the communality for that variable (Cattell, 1952, pp. 153 ff.).

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[13] Seventy-six respondents had to be dropped from the analyses because they failed to give codable responses to one or all of the five free-response questions.

Table 14

Intercorrelations of Responses for a Free-Response Instrument (X_1-X_5) and the OAS (X_6-X_{13})* (N=365)

Variables:		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}
X_1	Highest	(72)	43	62	72	67	26	40	37	39	37	42	39	35
X_2	Lowest		(55)	55	46	46	34	19	34	37	35	30	34	27
X_3	Plan			(75)	73	75	35	34	36	42	35	37	36	31
X_4	Free				(82)	82	30	39	34	38	28	36	34	33
X_5	Mature					(82)	31	36	35	44	30	36	33	33
X_6	R-ES						(37)	20	37	36	22	25	31	27
X_7	I-ES							(41)	38	36	31	35	29	41
X_8	R-ES								(45)	43	44	32	44	45
X_9	I-ES									(50)	44	41	34	50
X_{10}	R-30										(46)	46	43	34
X_{11}	I-30											(46)	38	36
X_{12}	R-30												(44)	41
X_{13}	I-30													(50)

*Decimal points omitted. All coefficients are positive and significant at the .01 level. Estimated communalities in parentheses.

Factor Analysis I

The first principal axes analysis was based on the matrix of intercorrelations of variables X_1, X_2, . . . X_5. Three factors, accounting for 99 per cent of the total matrix variance, were extracted from the principal axes solution and rotated orthogonally by the Quartimax method (Neuhaus and Wrigley, 1954). The factor matrices and resulting communalities for the five variables of the free-response LOA instrument are presented in Table 15.

Table 15

Factor Matrices and Communalities* For Variables X_1, X_2, . . . X_5: Free-Response LOA Instrument (N=365)

	Quartimax Loadings			Principal Axes Loadings			
Variable:	I	II	III	I	II	III	h^2
X_1: Highest	79	-01	31	79	14	-27	72
X_2: Lowest	55	49	00	60	-43	-07	55
X_3: Plan	84	18	-12	85	-13	12	75
X_4: Free	90	-08	03	89	16	02	82
X_5: Mature	90	-08	-11	88	13	16	82
% Total Variance:	88	8	3	89	7	3	

*Decimal points omitted. All loadings are positive unless otherwise indicated.

For purposes of interpretation, a loading of .40 was arbitrarily chosen as the cutting point. The rotated loadings show that all of the five variables comprising the free-response measure of LOA have loadings greater than .40 on factor I of the rotated matrix. Factor II appears to load primarily on X_2, the lowest choice level, with a loading of .49. None of the five variables has a loading above the .40 cutting point on factor III.

Discussion

Only two factors appear to afford a basis for interpreting the internal structure of the free-response LOA instrument.[14] Factor I may be tentatively identified as high vs. low general LOA, since all variables have loadings on it above the .40 criterion. Factor II can only be described in terms of one variable, the lowest choice level. This has at least a superficial resemblance to the "realistic" factor identified in the Wisconsin study by Sewell. However, the analysis presented here is based on an orthogonal rotation, while that of Sewell was based on an oblique rotation.

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[14] A recent analysis of these and other data, employing the Varimax technique for rotating to orthogonal simple structure, reveals essentially the same structure for both the Wisconsin and Michigan free-response measures of LOA. That is, both sets of data were interpreted in terms of a clear general LOA factor and a factor identified as realistic LOA. However, the Varimax technique, applied to the same principal axes data in Table 15, yielded a third factor having a loading of .59 on variable X_1, the highest choice level. In Table 15, factor III also has its highest loading on X_1, but it is below the .40 criterion. Cf. Haller, A. O., W. H. Sewell, and I. W. Miller (1960), The factorial structure of level of occupational aspiration, unpublished manuscript.

Nevertheless, there is a fairly high degree of similarity between the factorial structure of the free-response instrument and the factorial structure of the OAS. Both instruments exhibit a clear general LOA factor. Moreover, factors II and III of the OAS analysis have their highest loadings on the realistic age 30 and the realistic end-of-schooling items respectively. The second factor in the present analyses bears some conceptual resemblance to the realistic component which appeared in both factors II and III of the OAS factorial pattern. That is, factor II of the free-response instrument has its highest loading on variable X_2, the lowest choice level. Since the profile analysis of the OAS item mean scores clearly shows that the lowest choice levels are consistently the realistic items, factor II appears to be somewhat similar to both realistic factors II and III of the OAS. However, since factor II has a loading above .40 on only one variable, labeling it is highly tentative and perhaps dubious. Moreover, separate factor analyses of two measurements may yield strikingly similar patterns but this does not, as such, tell us whether corresponding factors in each matrix are in fact the same functional entities. If they are not, assigning the same labels to them is grossly misleading. The question of whether these two LOA instruments share the same factorial "space" suggested factor analyzing the complete 13 by 13 correlation matrix of responses to the variables of both instruments.

Factor Analysis II

The procedure used in the above analysis was applied to the entire 13 variable matrix presented in Table 14. Communality estimates for variables X_1, X_2, . . . X_5, remain the same. Three factors, accounting for 87 per cent of the total matrix variance, were extracted from the principal axes matrix and rotated orthogonally by the Quartimax technique. The factor matrices and resulting communalities are shown in Table 16.

A factor loading of about .40 was arbitrarily selected as a cutting point in interpreting the rotated loadings. An examination of Table 16 shows that all of the free-response variables (X_1 - X_5) have loadings well above .40 on factor I. Three of the OAS variables (X_7, X_9, and X_{11}) also have loadings above the cutting point on this factor. However, they are not as large as the free-response loadings and several other OAS variables (notably X_2 and X_{12}) have loadings near the .40 criterion. Moreover, the variance between the loadings of all OAS variables on this factor is not great (.35 to .44), making a clear-cut distinction among the OAS variables on this factor difficult. Nevertheless, factor I is clearly a general factor belonging primarily to the free-response instrument, although all of the OAS variables contribute moderately to the factor variance.

Factor II is also readily interpretable. Whereas none of the free-response variables has a loading greater than .20 on this factor, all of the OAS variables, with the exception of X_6, have loadings at or well above the .40 criterion. Even X_6, however, with a loading of .30, contributes to this factor more than any of the free-response variables.

Table 16

Factor Matrices and Communalities* for a Free-Response Instrument (X_1-X_5) and the OAS (X_6-X_{13})
(N=365)

	Quartimax Loadings			Principal Axes Loadings			
Variable:	I	II	III	I	II	III	h^2
X_1	79	16	-13	76	-22	17	66
X_2	55	20	42	60	-07	-39	52
X_3	84	07	18	78	-32	-14	73
X_4	90	-01	-07	79	-43	11	82
X_5	89	01	-02	79	-41	06	80
X_6	35	30	30	46	12	-26	30
X_7	41	40	-26	53	16	30	39
X_8	38	54	09	59	31	-05	45
X_9	44	52	06	63	25	-02	46
X_{10}	35	54	07	56	32	-03	42
X_{11}	41	46	-06	57	21	10	38
X_{12}	38	49	11	57	26	-07	40
X_{13}	35	57	-10	57	34	15	46
% Total Variance:	57	25	06	69	13	05	

*Decimal points omitted. All loadings are positive unless otherwise indicated.

Thus, factor II may be clearly identified as an OAS vs. free-response factor.

Factor III has only one variable (X_2) which has a loading above .40. Again, this makes its identification tenuous. However, X_2 is the lowest choice level, and in Factor Analysis I it was the only substantial contributor to a factor which was interpreted as realistic LOA. Also, as in Table 15, X_2 is the only variable loading substantially on this third factor. This suggests two things. First, variable X_2 (lowest choice level) which was, in Factor Analysis I, tentatively identified as a realistic factor sharing the realistic components of the OAS factors II and III, appears to represent a variable which is independent of not only the remaining free-response variables but also of all of the OAS variables. Hence, one earlier interpretation regarding the conceptual similarity of certain OAS and free-response factors turns out to be unsupported by the results of the above analysis. Secondly, the fact that this realistic factor appears when additional variables (OAS items) are added to the free-response variables (and also when different samples are employed and different rotational procedures are used[15]) suggests that the factor assessed by variable X_2 (lowest choice level) has substantial factorial invariance. However, it is apparently a factor which is not assessed by the OAS, although X_6 (realistic end-of-schooling, OAS) has a loading of .30 on this factor. Nevertheless, its probable importance is slight, for it is a small factor (6 per cent of total variance) and is interpretable in terms of only one variable.

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[15] Cf. Haller, Sewell, and Miller, op. cit.

Summary and Conclusions

Two separate factor analyses were performed in order to facilitate an interpretation of the meaning of the observed zero order correlation of +.62 between the OAS total score and the mean score of five variables coded from a free response LOA instrument. The first analysis indicated that all of the free-response variables clearly share a common factor. The second analysis revealed two interpretable factors. The first was identified as a common factor shared by both LOA instruments, although loading relatively higher and more consistently on the free-response variables than on the OAS variables. This suggests that the two common factors isolated separately for each instrument are in fact quite similar and, hence, may be labeled as high vs. low general LOA. However, the second factor loaded substantially on the OAS variables but had essentially negligible loadings on the free-response variables. If this factor means anything, it apparently represents an OAS vs. free-response factor.

It seems reasonable to conclude that the two LOA instruments are factorially equivalent only with respect to factor I in Table 16. However, this is the largest factor, accounting for 57 per cent of the total matrix variance. Equivalence of measurement, of course, is a matter of degree. The fact that both instruments share 57 per cent of the total variance on a single orthogonal factor makes it reasonable to conclude that both instruments are substantially equivalent measures of what appears to be a general LOA variable.

Correlation With Other Variables

The purpose of this section is to examine the correlates of the general LOA variable assessed by the OAS. The total score of OAS form X administered to the Lenawee sample was used as the measure of general LOA. Thirty-three variables from data obtained on the Lenawee sample were selected to be correlated with the OAS total score. These 33 variables were chosen from among the total data available because they seemed to represent variables which are generally considered important by sociologists and psychologists. The variables were limited to 33 because of practical restrictions imposed by available computational procedures. The variables are listed below in Table 17 under the classification of personal, social-situational, and performance variables. In addition, the instruments used to assess these variables are specified. For convenience of future discussion, each variable is assigned an identification number together with an abbreviated name form.

Table 17

Personal, Social-Situational, and Performance Variables Selected to be Correlated with the OAS Total Score
Data from Lenawee County Sample, N=433

Identification		Description	Source
A: Personal Variables:			
1.	(CP)	Number of years of college planned	Questionnaire
2.	(BVA_1)	Belief that work is of expressive value vs. instrumental value*	The MSU Work Beliefs Check-List
3.	(BVA_2)	Positive vs. negative evaluation of structured time	"
4.	(BVA_3)	Positive vs. negative evaluation of physical mobility	"
5.	(BVA_4)	Positive vs. negative evaluation of change	"
6.	(BVA_5)	Belief in internal vs. external determination of events	"
7.	(BVA_6)	Positive vs. negative evaluation of deferred gratification	"
8.	(OC)	Occupational Crystallization (certainty of occupational choice)	Questionnaire
9.	(SA)	Status anxiety	"
10.	(CFIQ)	Intelligence	Test of G-Culture Free-Scale 3A
11.	(CTP)	Personality Adjustment	The California Test of Personality (Total adjustment score)

*For all variables, the first named characteristic refers to a high score.

[continued]

[continuation of Table 17]

Identification	Description	Source
12. (PF_A)	Personality Factor-A:** "Cyclothymia vs. Schizothymia"	The 16 P.F. Test, Form B.
13. (PF_B)	PF-B: "General Intelligence vs. Mental Defect"	"
14. (PF_C)	PF-C: "Emotional Stability vs. dissatisfied emotionality"	"
15. (PF_E)	PF-E: "Dominance of Ascendance vs. Submission"	"
16. (PF_F)	PF-F: "Surgency vs. depressive anxiety"	"
17. (PF_G)	PF-G: "Character vs. lack of internal standards"	"
18. (PF_H)	PF-H: "Adventurous Autonomic resilience vs. inherent, withdrawn schizothymia"	"
19. (PF_I)	PF-I: "Emotional sensitivity vs. tough maturity"	"
20. (PF_L)	PF-L: "Paranoid schizothymia vs. trustful altruism"	"
21. (PF_M)	PF-M: "Hysterical unconcern or 'bohemianism,' vs. practical concernedness"	"
22. (PF_N)	PF-N: "Sophistication vs. rough simplicity"	"
23. (PF_O)	PF-O: "Anxious insecurity vs. placid self-confidence"	"
24. (PF_{Q_1})	PF-Q_1: "Radicalism vs. Conservativism"	"
25. (PF_{Q_2})	PF-Q_2: "Independent self-sufficiency vs: lack of resolution"	"

**The remaining Personality Factors are abbreviated as PF.

[continued]

[continuation of Table 17]

Identification		Description	Source
26.	(PF_{Q_3})	PF-Q_3: "Will control and character stability"	The 16 P.F. Test, Form B.
27.	($PF\text{-}Q_4$)	PF-Q_4: "Nervous tension"	"
B: Social-Situational Variables:			
28.	(SES)	Socio-economic status	Questionnaire
29.	(FES)	Father's educational status	"
30.	(PDE)	Parental desire for the youth's post-high school educational achievement	"
31.	(PDC)	Parental desire for the youth's high level of occupational achievement	"
C: Performance Variables:			
32.	(GPA)	High school grade point average: 1956-1957 (Academic courses only)	School Data
33.	(AC)	Number of agricultural courses taken through 1957	"

The coding operations involved in indexing the variables based on the questionnaire data, on the MSU Work Beliefs Check List, and on the school data are presented in Appendix C. Four-hundred and thirty-three respondents had either complete data on all variables or sufficient data to allow them to be included in the analysis. The product-moment correlations between each variable and all of the others (including the OAS score) were computed on a high-speed electronic computer. The entire 34 by 34 correlation matrix is presented in Appendix B.

The zero-order correlation of each variable with the total OAS score is presented in Table 18. For convenience, the correlations are ranked from those of largest magnitude to those which are not significantly correlated. Variable 1, number of years of college planned, has the highest positive correlation (+.64) with the OAS. Following variable 1 in order of magnitude of correlation are: grade point average (+.50), intelligence (+.45), parental desire for educational achievement (+.44), general intelligence as measured by personality factor B (+.38), socio-economic status of respondent's family (+.37), number of agricultural courses taken (-.30), father's educational status (+.29), belief in internal or self-determination of events (+.28), total adjustment as measured by a personality inventory (+.28), character or super-ego strength (+.26), adventurous autonomic resilience (+.24), parental desire for respondent's high level of occupational achievement (+.22), positive evaluation of deferred gratification (+.21), positive evaluation of physical mobility (willingness to re-locate in a modern industrial society) (+.20), emotional stability (+.19), sophistication (+.16), will control and character stability (+.16), independent self-sufficiency (+.14), cyclothymia (+.13), positive evaluation of structured time (+.11), and nervous tension (-.11). The remaining eleven variables are not significantly correlated with the OAS. With the exception of variable number 33 (number of agricultural courses) and variable 27 (nervous tension), all of the statistically significant correlates of the OAS are positive.

Table 18

Zero-Order Correlations of 33 Variables with the OAS Total Score:* Ranked by Magnitude (N=433)

Variable	Correlation with OAS	Variable	Correlation with OAS
1 (CP)	64	26 (PFQ_3)	16
32 (GPA)	50	25 (PFQ_2)	14
3 (CFIQ)	45	12 (PF_A)	13
30 (PDE)	44	3 (BVA 2)	11
13 (PF_B)	38	27 (PF_{Q_4})	-11
28 (SES)	37	16 (PF_F)	10**
33 (AC)	-30	21 (PF_M)	-08**
29 (FES)	29	24 (PF_{Q_1})	07**
6 (BVA 5)	28	20 (PF_L)	-07**
11 (CTP)	28	23 (PF_O)	-07**
17 (PF_G)	26	8 (OC)	-07**
18 (PF_H)	24	9 (SA)	-07**
31 (PDO)	22	5 (BVA 4)	06**
7 (BVA 6)	21	2 (BVA 1)	03**
4 (BVA 3)	20	19 (PF_1)	-03**
14 (PF_C)	19	15 (PF_E)	02**
22 (PF_N)	16		

*Decimals omitted. All correlations are positive unless otherwise indicated.

**Not significant at the .05 level.

Discussion

A categorical interpretation of the differential correlates of the OAS is made difficult by the fact that the magnitude of correlations is spread along a continuum. Nevertheless, if .40 is arbitrarily selected as a cutting-point for purposes of interpretation, then the major correlates of the OAS are describable in terms of educational achievement variables and one of their facilitative factors, intelligence.

Thus, college plans, grade-point average, intelligence, and parental desire for the youth's post-high school educational achievement seem to reflect a syndrome which could be interpreted as means to high levels of occupational achievement. Moreover, this interpretation agrees inferentially with the findings of Sewell in Jefferson county where measured LOA was the best single predictor of number of years of college achieved.[16] Since the analysis of the OAS tends to indicate that it shares a general factor with the LOA instrument used by Sewell, the OAS may also be found to be a predictor of post-high school educational achievement. If this is in fact the case, then one would expect the OAS to be substantially correlated with other variables which themselves facilitate educational achievement as well as occupational achievement. This is, of course, a highly inferential post-factum interpretation. Nevertheless, it seems capable of generating testable hypotheses for future research.

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[16] Sewell, W. H. (1955, unpublished data), op. cit.

The findings of three other reports based on the Lenawee and Mason samples suggest two additional conclusions concerning the behavioral correlates of the OAS. An investigation by Haller (1959) reports that farm youth who plan not to farm have significantly higher OAS scores than do farm youth who plan to farm. The data in Table 18 show that the number of agricultural courses taken in high school (variable number 33) correlates -.30 with OAS scores. Since high school boys planning to farm would be expected to take more agricultural courses than boys planning not to farm, LOA as measured by the OAS appears to be behaviorally relevant. That is, responses to the OAS appear to be consistant with other logically related forms of individual behavior; e.g., choice of high school courses, academic achievement and plans, etc. Finally, Haller and Butterworth (1960) and Miller[17] present data which indicate that high school boys choosing each other as best friends tend to have similar levels of occupational aspiration. Apparently, LOA is an orientation to occupational goals, an orientation which is functionally related to patterns of association in high school peer groups. This relationship between an individual's LOA and his reference groups is also supported by the data in Table 18. These data show that parental desire for the youth's occupational and educational achievement is positively and significantly correlated with LOA.

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[17]Miller, I. W. (1959) Occupational aspiration, V.-achievement, and peer group membership, unpublished manuscript.

The remaining correlates of the OAS are simply presented without any further interpretation. This seems appropriate since (1) they have relatively low correlations with the OAS and (2) there does not seem to be any other empirical data which would tend to either support or deny interpretations based on these correlations. Rather, we shall turn our attention to one final problem: how much of the OAS variance is specific to the OAS vis-á-vis the variables which are significantly correlated with the OAS; and the converse, how much of the OAS variance is shared with the combined variance of the correlates.

Uniqueness of the OAS

The multiple correlation, R, was computed using the OAS total score as the dependent variable and the 22 statistically significant correlates as the independent variables.[18] The multiple correlation was found to be +.73, which is significant beyond the .01 level.[19]

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[18] This analysis was performed on a high-speed electronic digital computer using a program which computed:

$$R = \sqrt{B_1 r_{1c} + B_2 r_{2c} + B_3 r_{3c} + \dots + B_n r_{nc}}$$

where: R = multiple correlation between a criterion C and n predictors.
B_n = the Beta weights.
r_{nc} = the zero-order correlation between variable n and the criterion.

See MISTIC Library Routine K2-M, Computer Laboratory, Michigan State University, East Lansing, Michigan.

[19] The test for the significance of R based on the F distribution is given by:

$$F = \frac{R^2}{1 - R^2} \cdot \frac{N - k - 1}{k}$$

where: R = multiple correlation,
k = number of independent variables,
N = sample size;

and $n_2 = N - k - 1$, $n_1 = k$

See Walker and Lev (1953, p. 324)

The uniqueness of an instrument as well as the common variance shared with other variables can be determined from the reliability coefficient of the instrument and its multiple correlation with other variables. Thorndike (1949, chap. 7) states:

> Percentage of unique variance is . . . given by the difference between the reliability coefficient of the new test and the square of its multiple correlation with the rest of the tests in the battery.

If the mean of the OAS reliability estimates, +.80, is taken as the reliability for the OAS, then:

Type of Variance	Estimate	Percentage
OAS common + unique = reliable	$r_{tt} = .80$	80
Common for OAS and 22 variables	$R^2 = (.73)^2$	52.3
OAS unique	$r_{tt} - R^2$	27.7

Thus, about 28 per cent of the total variance of the OAS is unique with respect to 22 other variables and,conversely, approximately 52 per cent of the total variance of the OAS is common with respect to the 22 variables.

Summary

The OAS has been shown to measure essentially the same variable as assessed by a free-response LOA instrument, and both instruments are quite similar with respect to their factorial structure. An examination of the correlates of the OAS indicates that general LOA as measured by the OAS is functionally related to certain behaviorally-relevant variables. These variables were identified as educational plans and achievements which

facilitate high levels of occupational achievement, parental desire for the youth's educational achievement, and intelligence. Additional findings from several other studies employing the OAS as a measure of LOA tend to agree with this interpretation. Finally, the OAS appears to have sub-substantial unique variance with respect to 22 other personal, social-situational, and performance measures. This suggests that the OAS is capable of making an independent contribution to measurement which is not made by these other measurements. Moreover, the multiple correlation of +.73 represents a small increment over the zero-order correlation of +.64 between the highest correlate of the OAS, college plans. This suggests that the remaining variables contribute little additional variance to the OAS which is not shared by the college plan variable or by the next correlate, high school grade point average (r = +.50). Finally, this lends justification to the decision to interpret the meaning of the OAS measurement primarily in terms of the four highest correlates.

Summary and Conclusions

One form of the OAS (form X) was administered to 441 seventeen-year-old high school boys in Lenawee County, Michigan. Additional data based on standardized tests, questionnaires, and school records were also obtained. Two parallel forms of the OAS (forms X and Y) were administered to 85 junior and senior high school boys in Mason, Michigan. The data gathered from these samples were then analyzed for purposes of studying the reliability, internal structure, and correlates of the OAS.

The reliability analysis involved two preliminary tasks. Parallel halves and parallel forms of the OAS were developed. The equivalence of

these were then checked against the criteria of statistically equivalent means and variances. With the exception of the means of forms X and Y, the parallel halves for each form and administration were found to have equivalent means and variances. Three coefficients of internal consistency, based on parallel halves, were computed. A coefficient of stability was computed from the correlation between the total scores of forms X and Y administered 10 weeks apart. In addition, the standard error of measurement was computed for each of the three administrations of the OAS. The four reliability coefficients centered around a mean coefficient of +.80, and the mean of three estimates of the standard error of measurement was 5.3. These results suggest that the OAS has substantial reliability in terms of the relative rank of individuals on LOA. Moreover, the variable LOA as assessed by the OAS appears to be relatively stable over a 10 week period. Finally, it was suggested that if the OAS is to be used for measuring individual differences on LOA, reasonable precision would be obtained by grouping scores into high, middle, and low categories. This depends, however, on the purposes of the user of the OAS.

The analysis of the internal structure of the OAS indicated that, in general, idealistic (preference) responses are higher than realistic (expectation) responses in terms of average item scores. This appears to be consistent with the findings of general level of aspiration research. There was also some indication that average response levels based on long-range ("ideal") goals are higher than average response levels based on short-range ("action") goals. However, the data for this are less clear than are the data regarding the realistic and idealistic levels. More-

over, the practical significance of differential levels is questionable in the light of the factorial structure of the OAS. Only one orthogonal factor was clearly interpretable, and this was identified as high vs. low general LOA. The remaining two factors were relatively small and seemed to suggest that, if meaningful at all, they were interpretable as long and short range orientations to occupational goals. There were no factors which corresponded to the realistic vs. idealistic levels of LOA.

As for the concept LOA, these results suggest that while it may be legitimate to retain the distinction between idealistic and realistic LOA score levels, the proposition that these are factorially independent dimensions of LOA is highly dubious and, for the OAS data, generally unsupported. Rather, LOA as measured by the OAS turns out to be a unidemensional variable which is assessed equally well by each of four different sets of questions. In fact, the LOA variable is probably measured more efficiently by several questions than by any single question alone, since the reliability of any instrument is partly a function of the number of items employed. It seems reasonable to conclude that the OAS is essentially a factorially pure measurement of what has been tentatively labeled as general LOA.

An investigation of the relationship between the OAS and a free-response LOA instrument indicated that they are substantially equivalent measures of general LOA, both in terms of shared variance and in terms of similarity of internal structure. Additional personal, social-situational, and performance correlates of the OAS were also examined. Those variables having a relatively high correlation with the OAS were college plans, high

school grade point average, intelligence, and parental desire for the youth's post-high school educational achievement. These were interpreted as behaviorally-relevant correlates of LOA, since they represent either direct means to occupational achievement or facilitative factors in that achievement process. The findings of several other studies employing the OAS as a measure of LOA were also cited. These presented evidence directly supporting the behavior-relevance interpretation as well as suggesting that level of occupational aspiration is an orientation to occupational goals which tends to be shared among members of high school peer groups. The remaining correlates were simply presented without interpretation.

An analysis of the uniqueness of the OAS vis-à-vis 22 variables significantly correlated with it indicated that approximately 28 per cent of the total OAS variance, although reliable, is independent of the other non-LOA variables examined. In a word, over one-fourth of the OAS variance has yet to be accounted for in terms of its correlates.

In conclusion, the OAS appears to be a reliable and factorially pure measure of a general LOA variable. Thus, it is probably a more effective and practical measure of general LOA than is the free-response coding technique in either the single or multiple question format. The concurrent correlates of the OAS tend to indicate that measured LOA is behaviorally relevant. Finally, the observation that over one-fourth of the OAS variance is unaccountable in terms of non-LOA variables suggests that this variance should be examined by future research concerned with the conceptualization and measurement of LOA.

CHAPTER V

SUMMARY AND CONCLUSIONS

The central task of this thesis has been the evaluation of the Occupational Aspiration Scale, an instrument designed to measure level of occupational aspiration. However, the concept LOA appeared to lack clear theoretical and empirical formulation, although it had been applied rather extensively in research. In Chapter II, a preliminary examination of the concept was approached in two ways. First, the possibility of treating LOA as a special case of the level of aspiration paradigm was examined. Secondly, various approaches to the conceptualization and measurement of LOA were reviewed. This led to the identification of several unresolved issues in the conceptualization of LOA. Requirements for a measurement of LOA capable of empirically clarifying these conceptual issues were then specified.

With these requirements as a context, the rationale and development of the Occupational Aspiration Scale was presented in Chapter III. It was proposed to evaluate the OAS by treating it as an empirical tool for clarifying several of the issues involved in conceptualizing LOA. Three issues were analyzed: (1) the stability of measured LOA, (2) the internal structure of the LOA concept, including the problem of differential response levels and/or factorial types of LOA, and (3) the "meaning" of LOA in terms of its relationship with other variables. Chapter IV presented the results of the reliability, internal structure, and correlation studies. The purpose of this chapter is to summarize the

major findings of the thesis, using these as the basis for an evaluation of the Occupational Aspiration Scale and its measured variable, LOA.

Level of Occupational Aspiration

The level of aspiration paradigm was seen as focusing on the concept of a goal-structure differentiated along a continuum of perceived valence and difficulty. Two categories of "expression levels" were identified: preference and expectation. Research findings were cited which indicated that stimulus-questions worded at the preference level would elicit higher average scores than questions worded at the expectation level. In addition, a distinction was made between long-range ("ideal") goals and short-range ("action") goals. Whether or not the concept LOA could be considered as a special case of the general level of aspiration paradigm seemed to revolve around the characteristics of the occupational goal-structure.

The criteria used to arrange occupations in a hierarchy, and the relationship between the rankings of occupations on different criteria were then examined. It was concluded that prestige or social standing was the criterion most often used. Evidence was cited indicating that empirical rankings of occupations based on the prestige dimension were relatively unbiased and stable, both within and between groups, contemporaneously and over time. Finally, rankings of occupations by prestige were found to agree substantially with rankings of occupations in terms of intelligence, income, ability, skill, and required training. This was interpreted as support for considering occupational prestige

not only as a measure of valence, but also as a measure of difficulty. It was concluded that it is meaningful to speak of occupational levels in terms of differential valence and difficulty. Thus, the possibility of clarifying and measuring LOA by incorporating it in the level of aspiration paradigm seemed justified.

Historically, the concept LOA appears to be an extension of level of aspiration research. However, variations in question wordings and adherence to single-question measurements failed to develop and clarify the meaning of LOA.

The introduction of the Strong Vocational Interest Blank, containing the Occupational Level Scale, represented the first attempt to standardize a measurement of LOA. While the utility of such a scale appeared to be based largely on intuition, the introduction of the scale as part of an occupational interest inventory resulted in its widespread use. Several attempts to interpret the "meaning" of the OL scale were made. Most of these were speculative, and as yet there does not seem to be any general agreement concerning its meaning. Attempts at validation were usually tautological and based on poorly defined criteria. Moreover, the OL scale has been found to be uncorrelated with another standardized scale, the Level of Interest section of the Lee-Thorpe Occupational Interest Inventory. It was suggested that both of these instruments are inadequate measures because they attempt to assess LOA indirectly in terms of interest areas. Thus, they are not equivalent to "setting the level of aspiration."

A review of non-standardized measurements of LOA revealed a proliferation of techniques and interpretations. The techniques were

usually limited to the coding of free-responses on a single stimulus-question. Often, these responses were ranked by judges selected especially for the particular study, rather than ranked in terms of an objective set of empirical rankings. Because the various stimulus-questions were usually worded differently, the resulting measurements were not operationally equivalent. Finally, the use of single questions precluded the study of the reliability and internal structure of measured LOA.

These findings led to a set of specifications for measuring LOA which seemed necessary if the concept LOA were to be clarified:

I. The measurement should be direct: i.e., respondents should publicly indicate their aims in terms which are operationally equivalent to "setting the level of aspiration."

II. The measurement should be multiple-item and include variations in question-wording which reflect different "expression levels" and goal-ranges (e.g., "action" vs. "ideal" goals).

III. The responses should be directly amenable to ordering by levels: i.e., multiple-choice rather than free-response.

IV. The scoring criteria should be objective, relatively unbiased, and represent a full-range of possible responses.

V. The scoring criteria should approximate as nearly as possible the notion of a differentiated goal structure along dimensions of perceived valence and difficulty.

The Occupational Aspiration Scale

The OAS is an eight-item multiple choice LOA instrument designed to assess two expression levels, the realistic and the idealistic, each at two goal-levels, end-of-schooling and age-30. Each of the four possible combinations are assessed twice. The ten alternatives for each question are drawn systematically from among 90 of the occupations ranked by the NORC study of the prestige of occupations. Each set of ten alternatives spans the full range of occupational prestige, and the alternatives are scored from 0 to 9. The total possible score for all eight items ranges from 0 to 72, and this score is taken as a measure of the general LOA variable. Thus, the OAS incorporates aspects of the level of aspiration paradigm while meeting the five general specifications set forth above. The task of evaluating the OAS involved evaluating the LOA variable as measured by the OAS. Three analyses of the OAS were proposed: (1) reliability, (2) internal structure, and (3) correlates.

Several estimates of the reliability of the OAS based on two equivalent forms and two different samples of 17 year-old high school boys indicated that the OAS has substantial reliability. An analysis of the internal structure of the OAS indicated that idealistic levels are higher than realistic levels in terms of average scores. Results also indicated that age-30 goals yield higher average scores than do end-of-schooling goals. Both of these observations appear to be congruent with the findings of general level of aspiration research. However, a factor analysis of the OAS failed to produce orthogonal factors clearly inter-

pretable as either idealistic vs. realistic LOA or long-range vs. short-range LOA. Rather, one general factor accounting for 75 per cent of the total matrix variance was identified as high vs. low general LOA. It was concluded that the OAS was a factorially pure measure of what appeared to be a general LOA variable.

The concurrent correlates of the OAS tended to indicate that: (1) the OAS is equivalent to a free-response measure of general LOA, both in terms of shared variance and in terms of similarity of factorial structure, and (2) the OAS has relatively high correlations with variables judged to be behaviorally-relevant in terms of facilitating the occupational achievement process. However, over one-fourth of the OAS variance was unaccounted for by these behaviorally-relevant variables.

Discussion and Conclusions

It is difficult to separate an evaluation of the OAS from an evaluation of the LOA variable as measured by the OAS. However, we shall begin by first presenting several conclusions concerning the contribution of the OAS analyses to the clarification of the LOA concept. Then we shall attempt to deal with the OAS instrument more specifically in terms of its application in research.

The Structure and Meaning of the LOA Concept

With respect to structure, LOA as measured by the OAS appears to be a unitary variable which, however, may be measured by using several types of question-wording. Moreover, the term "aspiration" as used in the LOA concept does not refer primarily to the fantasy elements of occupational choice. Rather, in this context, aspiration is better interpreted as simply referring to an orientation to act with respect to some limited range on a prestige hierarchy of occupations. While the preference component of this orientation appears at a higher goal level than does the expectation component, these levels are highly correlated. This means that the various wordings of single stimulus-questions used in the study of LOA are probably equivalent although imperfect measures of LOA. Finally, LOA as measured by a multiple-item instrument (such as the OAS) can be expected to be reasonably stable over time, thus representing a relatively enduring orientation to action.

With respect to meaning or conceptual content, the interpretive task centers around the question of the dynamics of the variable LOA. Several attempts have been made to categorically identify LOA in terms such as motive, drive, or aspiration (Barnett, et al., 1952). But this is mere labeling, and as such tells us little concerning the dynamics and meaning of specific motives, etc.

An aspiration as such seems more similar to the concept of attitude than it does to the concept of motive. If a motive structure is conceptualized in terms of direction and intensity components, then either an aspiration or an attitude may serve as the directionizing component

for a motive (Peak, 1955). Or, put another way, attitudes and aspirations may be grouped under the rubric of orientation. Thus, when we speak of LOA as an orientation to act with respect to some limited range on a hierarchy of occupational prestige, we are referring only to the directionizing character of LOA. Measured LOA is then taken as an indicator of the occupational goal-level to which the individual is oriented rather than as a measure of drive or motivation to achieve that goal-level. In this schema, the behaviorally-relevant correlates of LOA may be viewed in several ways: (1) as antecedents which influence and help to determine the direction of the LOA orientation, (2) as consequences of an LOA orientation, or (3) as factors which facilitate and sustain an LOA orientation.

An Evaluation of the OAS Instrument

The OAS appears to be a reliable and factorially pure measure of general LOA, and the total score may be taken as an estimate of this variable. Inasmuch as the sub-indices, such as realistic and idealistic levels, are heavily saturated with the general LOA factor, they evidently do not measure different aspects of LOA. Rather, each OAS item contributes substantially to a measure of the general LOA factor. Moreover, the OAS overcomes the difficulties associated with the coding of free-responses while at the same time apparently measuring the same variable assessed by a free-response instrument. Consequently, the OAS is a more efficient measure of LOA than are the free-response techniques. In addition, existing multiple-choice measures (such as the Strong and

Lee-Thorpe instruments) were shown, in Chapter II, to be ineffective measures of LOA. Finally, the correlates of the OAS were examined and were found to be behaviorally-relevant to the occupational and educational achievement processes. This suggests that the OAS may be a useful instrument for research dealing with these achievement processes and with the general area of social mobility.

In addition, the OAS may have applications in the field of vocational and educational counseling. For example, those youth who have high levels of occupational aspiration but who do not plan to go to college may be helped to realistically re-appraise their educational plans. On the other hand, those youth who have low LOA and do not plan to attend college but whose past performance indicates that they have the ability to achieve at a high level may be encouraged to attend college if their LOA is raised.

Limitations of the Study

The results of this investigation should not be generalized to groups other than 17 year-old high school boys. Moreover, the empirical conclusions concerning the LOA concept hold true only for LOA as measured by the OAS. Perhaps other LOA measurement designs will yield different interpretations. In addition, only a few of the possible correlates of the OAS were examined. Finally, the specific techniques used to analyze the OAS, especially the procedures for the factor analyses, probably have influenced the results. Other techniques may lead to different conclusions regarding both the OAS and the LOA concept.

Future Research

Future research should attempt to examine the OAS on samples of varying age, sex, and educational characteristics. Reliability, internal structure, and correlates may be found to be different for differing samples. Broad normative data are needed if OAS scores are to be used for counseling and guidance. In addition, the predictive efficiency of the OAS with respect to educational and occupational achievement variables needs to be examined. Finally, the development and dynamics of the LOA variable need to be studied in more detail. Additional techniques for assessing LOA should be designed and analyzed for purposes of conceptual clarification. Research aimed at integrating the LOA concept into existing theory and research (such as achievement motivation; McClelland, et al., 1953) should also be attempted.

It is hoped that the results of this thesis will stimulate further attempts to measure and clarify the LOA concept. When LOA has been sufficiently clarified, the question of its significance for the growing body of social and psychological research may be more completely answered.

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APPENDIX A

OAS Forms and Lenawee County Normalized OAS Scores

NOTE: The unmarked form is form X;
Form B is identical to form Y.

OUR NAME_____

OCCUPATIONAL ASPIRATION SCALE

IIS SET OF QUESTIONS CONCERNS YOUR INTEREST IN DIFFERENT KINDS OF JOBS. THERE E EIGHT QUESTIONS. EACH ONE ASKS YOU TO CHOOSE ONE JOB OUT OF TEN PRESENTED.

E SURE YOUR NAME IS ON THE TOP OF THIS PAGE.

AD EACH QUESTION CAREFULLY. THEY ARE ALL DIFFERENT.

SWER EACH ONE THE BEST YOU CAN. DON'T OMIT ANY.

estion 1. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

1.1____Lawyer

1.2____Welfare worker for a city government

1.3____United States representative in Congress

1.4____Corporal in the Army

1.5____United States Supreme Court Justice

1.6____Night watchman

1.7____Sociologist

1.8____Policeman

1.9____County agricultural agent

1.10___Filling station attendant

Question 2. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

2.1____ Member of the board of directors of a large corporation

2.2____ Undertaker

2.3____ Banker

2.4____ Machine operator in a factory

2.5____ Physician (doctor)

2.6____ Clothes presser in a laundry

2.7____ Accountant for a large business

2.8____ Railroad conductor

2.9____ Railroad engineer

2.10____ Singer in a night club

Question 3. Of the jobs listed in this question which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

3.1____ Nuclear physicist

3.2____ Reporter for a daily newspaper

3.3____ County judge

3.4____ Barber

3.5____ State governor

3.6____ Soda fountain clerk

3.7____ Biologist

3.8____ Mail carrier

3.9____ Official of an international labor union

3.10____ Farm Hand

Question 4. Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

4.1____ Psychologist

4.2____ Manager of a small store in a city

4.3____ Head of a department in state government

4.4____ Clerk in a store

4.5____ Cabinet member in the federal government

4.6____ Janitor

4.7____ Musician in a symphony orchestra

4.8____ Carpenter

4.9____ Radio announcer

4.10____ Coal miner

Question 5. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

5.1____ Civil engineer

5.2____ Bookkeeper

5.3____ Minister or Priest

5.4____ Streetcar motorman or city bus driver

5.5____ Diplomat in the United States Foreign Service

5.6____ Share cropper (one who owns no livestock or farm machinery, and does not manage the farm)

5.7____ Author of novels

5.8____ Plumber

5.9____ Newspaper columnist

5.10____ Taxi driver

Question 6. Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

6.1____ Airline pilot

6.2____ Insurance agent

6.3____ Architect

6.4____ Milk route man

6.5____ Mayor of a large city

6.6____ Garbage collector

6.7____ Captain in the army

6.8____ Garage mechanic

6.9____ Owner-operator of a printing shop

6.10___ Railroad section hand

Question 7. Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

7.1____ Artist who paints pictures that are exhibited in galleries

7.2____ Traveling salesman for a wholesale concern

7.3____ Chemist

7.4____ Truck driver

7.5____ College professor

7.6____ Street sweeper

7.7____ Building contractor

7.8____ Local official of a labor union

7.9____ Electrician

7.10___ Restaurant waiter

Question 8: Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

8.1____ Owner of a factory that employs about 100 people

8.2____ Playground director

8.3____ Dentist

8.4____ Lumberjack

8.5____ Scientist

8.6____ Shoeshiner

8.7____ Public school teacher

8.8____ Owner-operator of a lunch stand

8.9____ Trained machinist

8.10____ Dock worker

MICH. 1: OAS-R STUDY
February, 1959

YOUR NAME _____

OCCUPATIONAL ASPIRATION SCALE

(FORM B)

This set of questions concerns your interest in different kinds of jobs. There are eight questions. Each one asks you to choose one job out of ten presented.

Be sure your name is on the top of this page.

Read each question carefully. They are all different.

Answer each one the best you can. Don't omit any.

QUESTION 1: Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

1.1 _____ Owner of a factory that employs about 100 people

1.2 _____ Playground director

1.3 _____ Dentist

1.4 _____ Lumberjack

1.5 _____ Scientist

1.6 _____ Shoeshiner

1.7 _____ Public school teacher

1.8 _____ Owner-operator of a lunch stand

1.9 _____ Trained machinist

1.10 _____ Dock worker

QUESTION 2: Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

2.1 _____ Artist who paints pictures that are exhibited in galleries

2.2 _____ Traveling salesman for a wholesale concern

2.3 _____ Chemist

2.4 _____ Truck driver

2.5 _____ College professor

2.6 _____ Street sweeper

2.7 _____ Building contractor

2.8 _____ Local official of a labor union

2.9 _____ Electrician

2.10_____ Restaurant waiter

QUESTION 3: Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN GET when your SCHOOLING IS OVER?

3.1 _____ Airline pilot

3.2 _____ Insurance agent

3.3 _____ Architect

3.4 _____ Milk route man

3.5 _____ Mayor of a large city

3.6 _____ Garbage collector

3.7 _____ Captain in the army

3.8 _____ Garage mechanic

3.9 _____ Owner-operator of a printing shop

3.10_____ Railroad section hand

QUESTION 4: Of the jobs listed in this question, which ONE would you choose if you were FREE TO CHOOSE ANY of them you wished when your SCHOOLING IS OVER?

4.1 _____ Civil engineer

4.2 _____ Bookkeeper

4.3 _____ Minister or Priest

4.4 _____ Streetcar motorman or city bus driver

4.5 _____ Diplomat in the United States Foreign Service

4.6 _____ Share cropper (one who owns no livestock or farm machinery, and does not manage the farm)

4.7 _____ Author of novels

4.8 _____ Plumber

4.9 _____ Newspaper columnist

4.10 _____ Taxi driver

QUESTION 5: Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

5.1 _____ Psychologist

5.2 _____ Manager of a small store in a city

5.3 _____ Head of a department in state government

5.4 _____ Clerk in a store

5.5 _____ Cabinet member in the federal government

5.6 _____ Janitor

5.7 _____ Musician in a symphony orchestra

5.8 _____ Carpenter

5.9 _____ Radio announcer

5.10 _____ Coal miner

QUESTION 6: Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

6.1 _____ Nuclear Physicist

6.2 _____ Reporter for a daily newspaper

6.3 _____ County judge

6.4 _____ Barber

6.5 _____ State governor

6.6 _____ Soda fountain clerk

6.7 _____ Biologist

6.8 _____ Mail carrier

6.9 _____ Official of an international labor union

6.10_____ Farm Hand

QUESTION 7: Of the jobs listed in this question, which is the BEST ONE you are REALLY SURE YOU CAN HAVE by the time you are 30 YEARS OLD?

7.1 _____ Member of the board of directors of a large corporation

7.2 _____ Undertaker

7.3 _____ Banker

7.4 _____ Machine operator in a factory

7.5 _____ Physician (dcctor)

7.6 _____ Clothes presser in a laundry

7.7 _____ Accountant for a large business

7.8 _____ Railroad conductor

7.9 _____ Railroad engineer

7.10_____ Singer in a night club

QUESTION 8: Of the jobs listed in this question, which ONE would you choose to have when you are 30 YEARS OLD, if you were FREE TO HAVE ANY of them you wished?

8.1 _____ Lawyer

8.2 _____ Welfare worker for a city government

8.3 _____ United States representative in Congress

8.4 _____ Corporal in the Army

8.5 _____ United States Supreme Court Justice

8.6 _____ Night watchman

8.7 _____ Sociologist

8.8 _____ Policeman

8.9 _____ County agricultural agent

8.10 _____ Filling station attendent

* * * *

DO NOT WRITE BELOW THIS LINE

---

1 & 3 = _____ (A)

2 & 4 = _____ (B)

5 & 7 = _____ (C)

6 & 8 = _____ (D)

R = _____ (A & C)

I = _____ (B & D)

Total Score =

Normalized Data for O.A.S. Raw Scores

The normalized data for the O.A.S. scores were computed by the method given by Edwards.[1] The data entitled "observed z" represents equivalent scores having a mean of zero and a standard deviation of 1.0. However, the form of the "observed z" distribution is the same as that for the raw scores. The cumulative frequencies below a given raw score plus one-half of the frequencies of that score were converted to cumulative percentages (or proportions of total N). These cumulative percentages were used to find the z score value corresponding to the point in a theoretical normal distribution by referring to a table of the unit normal curve. These normalized z scores also have a mean of zero and a standard deviation of 1.0: however, the scores have been stretched in such a way as to normalize the distribution. Also, the cumulative percentages were converted to equivalent T-scores by means of a table of T-scores. Essentially, a T-score equals a normal z score multiplied by 10 and the product added to 50. Hence, the T-scores have a mean of 50 and a standard deviation of 10.0. Standard scores enable us to compare measurements from various distributions of comparable form since we have reduced the measurements of each distribution to a common scale.

Raw Scores:	Mean =36.2	
	S.D. = 12.99	N = 441
T-Scores:	Mean = 50.0	
	S.D. = 10.0	

I. W. Miller, Jr.
April, 1958

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[1] Edwards, A. L., Statistical Methods for the Behavioral Sciences (New York; Rinehart and Company, Inc.: 1954)

	Raw Score	f	Observed Z	cf	cp	Normal Z	T-Scores
(1)	2	1	-2.63	0.5	.0011	-3.07	20
(2)	10	2	-2.02	2.0	.0045	-2.61	23
(3)	13	3	-1.79	4.5	.0102	-2.32	27
(4)	14	2	-1.71	7.0	.0159	-2.15	28
(5)	16	6	-1.56	11.0	.0250	-1.96	30
(6)	17	8	-1.48	18.0	.0409	-1.74	33
(7)	18	3	-1.40	23.5	.0533	-1.61	34
(8)	19	7	-1.32	28.5	.0647	-1.52	35
(9)	20	8	-1.25	36.0	.0817	-1.39	36
(10)	21	11	-1.17	45.5	.1033	-1.26	38
(11)	22	8	-1.09	55.0	.1248	-1.15	38
(12)	23	15	-1.02	66.5	.1510	-1.03	40
(13)	24	12	-0.94	80.0	.1816	-0.91	41
(14)	25	12	-0.86	92.0	.2089	-0.81	42
(15)	26	10	-0.78	103.0	.2338	-0.73	43
(16)	27	15	-0.71	115.5	.2622	-0.64	44
(17)	28	13	-0.63	129.5	.2940	-0.54	45
(18)	29	22	-0.55	147.0	.3337	-0.43	46
(19)	30	17	-0.48	166.5	.3780	-0.31	47
(20)	31	13	-0.40	181.5	.4120	-0.22	48
(21)	32	10	-0.32	193.0	.4381	-0.16	48
(22)	33	8	-0.25	202.0	.4585	-0.10	49
(23)	34	11	-0.17	211.5	.4801	-0.05	50
(24)	35	16	-0.09	225.0	.5108	0.03	50
(25)	36	8	-0.02	237.0	.5380	0.10	51
(26)	37	12	0.06	247.0	.5607	0.15	52
(27)	38	8	0.14	257.0	.5834	0.21	52

	Raw Score	f	Observed %	cf	cp	Normal %	T-Scores
(28)	39	9	0.22	265.5	.6027	0.26	53
(29)	40	13	0.29	276.5	.6276	0.33	53
(30)	41	10	0.37	288.0	.6538	0.40	54
(31)	42	8	0.45	297.0	.6742	0.45	55
(32)	43	9	0.52	305.5	.6935	0.51	55
(33)	44	13	0.60	316.5	.7184	0.58	56
(34)	45	5	0.68	325.5	.7389	0.64	56
(35)	46	7	0.75	331.5	.7525	0.68	57
(36)	47	9	0.83	339.5	.7707	0.74	57
(37)	48	10	0.91	349.5	.7934	0.82	58
(38)	49	8	0.99	358.0	.8127	0.89	59
(39)	50	4	1.06	364.0	.8263	0.94	59
(40)	51	11	1.14	371.5	.8433	1.01	60
(41)	52	9	1.22	381.5	.8660	1.11	61
(42)	53	4	1.29	388.0	.8808	1.18	62
(43)	54	5	1.37	392.5	.8910	1.23	62
(44)	55	5	1.45	397.5	.9023	1.29	63
(45)	56	8	1.52	404.0	.9171	1.39	64
(46)	57	9	1.60	412.5	.9364	1.53	65
(47)	58	4	1.68	419.0	.9511	1.66	67
(48)	59	3	1.76	422.5	.9591	1.74	67
(49)	60	7	1.83	427.5	.9704	1.89	69
(50)	61	5	1.91	433.5	.9840	2.15	71
(51)	62	1	1.99	436.5	.9908	2.36	74
(52)	63	1	2.06	437.5	.9931	2.46	75
(53)	64	2	2.14	439.0	.9965	2.70	78
(54)	65	1	2.22	440.5	.9999	3.70	80

	Raw Score	T-Score		Raw Score	T-Score
(1)	2	20	(28)	39	53
(2)	10	23	(29)	40	53
(3)	13	27	(30)	41	54
(4)	14	28	(31)	42	55
(5)	16	30	(32)	43	55
(6)	17	33	(33)	44	56
(7)	18	34	(34)	45	56
(8)	19	35	(35)	46	57
(9)	20	36	(36)	47	57
(10)	21	38	(37)	48	58
(11)	22	38	(38)	49	59
(12)	23	40	(39)	50	59
(13)	24	41	(40)	51	60
(14)	25	42	(41)	52	61
(15)	26	43	(42)	53	62
(16)	27	44	(43)	54	62
(17)	28	45	(44)	55	63
(18)	29	46	(45)	56	64
(19)	30	47	(46)	57	65
(20)	31	48	(47)	58	67
(21)	32	48	(48)	59	67
(22)	33	49	(49)	60	69
(23)	34	50	(50)	61	71
(24)	35	50	(51)	62	74
(25)	36	51	(52)	63	75
(26)	37	52	(53)	64	78
(27)	38	52	(54)	65	80

O. A. S. Individual Item T-Scores

Raw Score	T-Scores Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
0	27	30	31	25	36	22	22	21
1	40	31	43	30	43	26	28	29
2	47	40	49	34	45	31	41	35
3	52	45	52	43	47	40	46	39
4	56	45	55	49	51	45	48	40
5	58	47	58	54	53	46	52	45
6	62	50	60	58	54	48	57	49
7	65	54	65	59	59	52	60	54
8	72	59	71	63	66	60	63	58
9	80	64	80	68	71	69	71	63

APPENDIX B

Correlation and Factor Matrices

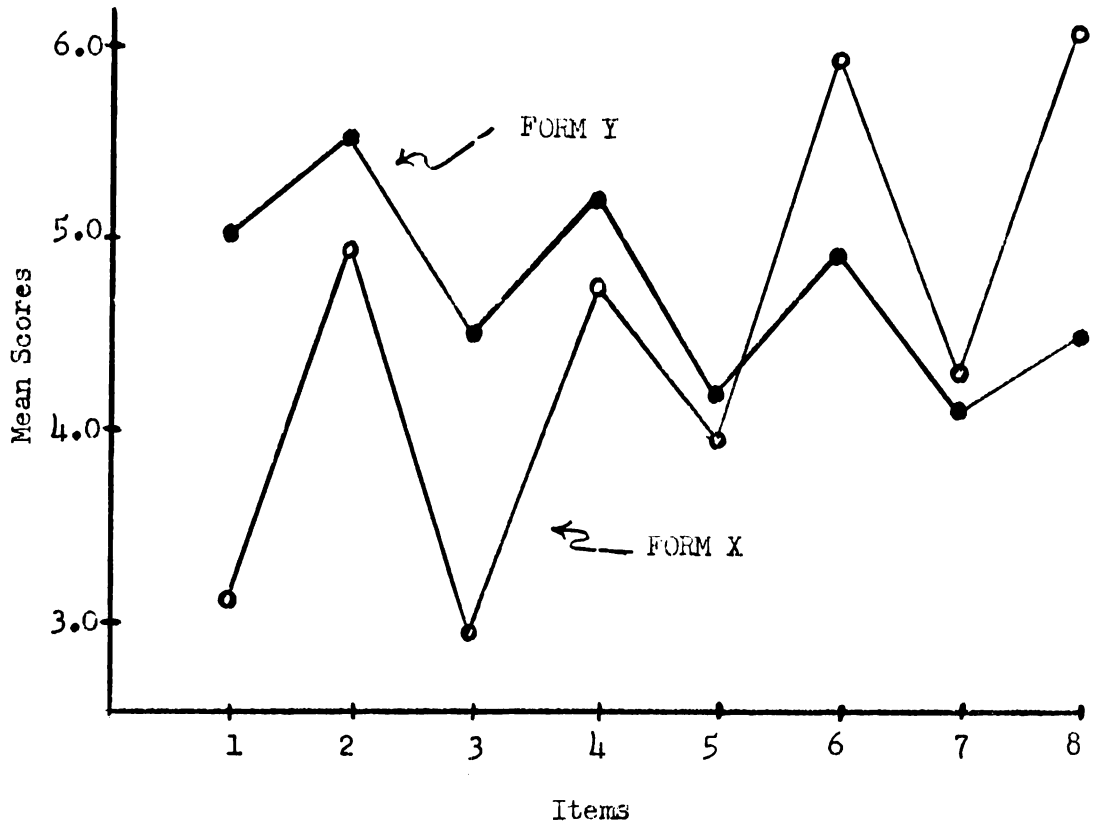


FIGURE 2: PROFILE OF ITEM MEAN SCORES, OAS FORMS X AND Y, MASON SAMPLE, N=85

TABLE 19

Item Intercorrelations and Communality Estimates* for OAS Form X, Mason Sample. N=85.

	Items							
	1	2	3	4	5	6	7	8
1	(39)	30	42	21	26	20	40	30
2		(51)	27	29	16	17	29	53
3			(60)	42	49	27	55	44
4				(42)	36	26	37	[illegible]
5					(56)	27	50	[illegible]
6						(25)	24	[illegible]
7							(57)	[illegible]
8								([illegible])

*Communalities estimated by Burt's technique (Cattell, 1952, p. 141) are in parentheses. Decimals omitted. All correlations are positive. Coefficients underlined are not significant at the .05 level.

Table 20

Factor Matrices and Communalities* for OAS Form X, Mason Sample. N=85.

	Quartimax			Principal Axes			
Items	I	II	III	I	II	III	h^2
1	49	18	33	52	-00	-33	38
2	32	65	09	52	-50	-08	53
3	76	08	05	74	19	-06	58
4	53	20	-24	57	00	23	38
5	68	-06	-15	62	29	14	49
6	38	14	-16	41	00	16	19
7	74	02	14	70	23	-15	56
8	51	55	-12	67	-34	12	58
Per cent total variance:	65	20	6	72	13	6	

*Decimals omitted. All figures are positive unless indicated.

Table 21

Item Intercorrelations and Communality Estimates* For OAS Form Y, Mason Sample. N=85.

	Items							
	1	2	3	4	5	6	7	8
1	(43)	30	26	35	43	23	26	22
2		(38)	26	36	32	27	35	26
3			(26)	29	22	14	19	20
4				(36)	35	25	28	20
5					(46)	28	34	27
6						(25)	26	25
7							(35)	33
8								(31)

*Communalities estimated by Burt's technique (Cattell, 1952, p. 154) are in parentheses. Decimals omitted. All correlations are positive. Coefficients underlined are not significant at the .05 level.

Table 22

Factor Matrices and Communalities* for OAS Form Y, Mason Sample. N=85.

	Quartimax			Principal Axes			
Items	I	II	III	I	II	III	h^2
1	62	-22	-06	59	27	-12	43
2	56	14	18	58	-06	15	37
3	42	-04	28	42	11	25	26
4	57	-07	18	57	14	13	36
5	65	-06	-18	63	11	-23	46
6	44	18	-05	45	-14	-07	23
7	53	28	-01	55	-22	-03	36
8	44	32	-02	47	-27	-02	29
Per cent total variance:	83	10	7	84	10	6	

*Decimal points omitted. All figures are positive unless indicated.

Table 23

Intercorrelations and Communality Estimates* for Variables X_1-X_8 (OAS Form X, pre-test) and Variables X_9-X_{16} (OAS Form Y, Post-Test): Mason Sample, N=85

Variables:		X_1	X_2	X_3	X_4	X_5	X_6	X_7	X_8	X_9	X_{10}	X_{11}	X_{12}	X_{13}	X_{14}	X_{15}	X_{16}
X_1	R-ES	(39)	30	41	21	26	20	40	30	23	22	34	17	17	02	30	23
X_2	I-ES		(53)	27	29	16	17	29	53	30	39	06	36	26	10	37	37
X_3	R-ES			(57)	42	49	27	55	44	31	41	31	37	34	26	30	26
X_4	I-ES				(43)	36	26	37	38	38	39	10	39	32	43	18	22
X_5	R-30					(52)	27	50	37	36	38	39	44	38	30	36	32
X_6	I-30						(48)	24	30	36	28	50	41	13	23	24	28
X_7	R-30							(57)	35	27	49	42	32	35	11	30	18
X_8	I-30								(56)	49	41	20	38	33	29	40	09
X_9	R-ES									(49)	30	26	35	43	23	26	22
X_{10}	I-ES										(51)	26	36	32	27	35	26
X_{11}	R-ES											(48)	29	22	14	19	20
X_{12}	I-ES												(44)	35	25	28	20
X_{13}	R-30													(43)	28	34	27
X_{14}	I-30														(40)	26	25
X_{15}	R-30															(40)	33
X_{16}	I-30																(34)

*Communalities estimated by Burt's technique (Cattell, 1952, p. 154) are in parentheses. Decimals omitted. All correlations are positive. Coefficients underlined are not significant at the .05 level.

Table 24

Factor Matrices and Communalities* for Variables X_1-X_8 (OAS Form X, pre-test) and Variables X_9-X_{16} (OAS Form Y, post-test): Mason Sample, N=85

	Quartimax			Principal Axes			
Variables	I	II	III	I	II	III	h^2
X_1	47	03	-39	46	18	-36	37
X_2	55	-46	-11	53	-38	-32	53
X_3	68	09	-14	68	12	-12	49
X_4	57	-07	26	57	-18	18	40
X_5	65	24	04	66	18	11	48
X_6	49	35	12	50	25	24	38
X_7	65	15	-31	65	26	-25	54
X_8	67	-25	04	66	-26	-10	51
X_9	58	-02	20	58	-11	15	38
X_{10}	63	-06	-01	63	-07	-06	40
X_{11}	46	52	-15	48	52	06	51
X_{12}	59	07	18	60	-02	16	39
X_{13}	55	-05	15	55	-12	09	32
X_{14}	41	03	45	42	-18	40	37
X_{15}	55	-14	-04	54	-12	-11	32
X_{16}	44	-01	04	44	-04	02	19
Per cent total variance:	55	9	7	55	9	7	

*Decimal points omitted. All figures are positive unless otherwise indicated.

Table 25

Correlation Matrix: OAS Total Score and 33 Personal, Social-Situational, and Performance Variables. Lenawee County Sample, N=433. . .

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	--	64	45	13	38	19	02	10	26	24	-03	-07	-08	16	-07	07	14
2		--	41	11	34	14	11	05	24	29	-06	-02	-12	17	-10	09	15
3			--	-02	35	10	07	08	15	12	-10	-09	-13	12	-06	-06	11
4				--	-01	-05	03	10	11	14	-02	03	-01	02	08	-03	04
5					--	10	-04	17	26	10	-11	-02	-13	21	-05	04	04
6						--	-03	-09	03	19	-07	-17	-13	04	27	-06	03
7							--	15	-03	12	03	03	06	12	-25	-05	02
8								--	03	06	-01	15	-02	06	08	02	-02
9									--	31	-07	12	-20	16	-14	01	10
10										--	-12	-05	-08	17	-34	00	-01
11											--	05	16	-11	14	07	05
12												--	02	07	20	09	12
13													--	-11	01	06	01
14														--	-11	04	06
15															--	-00	00
16																--	06
17																	--

NOTE: These variables are described by variable number in the variable identification form following this table. Two variables on the identification form do not appear on Table 25. These are variable numbers 31 and 36. Number 31 was omitted because it is redundant, being the sum of variables 29 and 30. Variable 36 was omitted because data on it were available for a sample of only 107.

[Table 25: continued]

18	19	20	21	22	23	24	25	26	27	28	29	30	32	33	34	35	
16	-11	28	03	11	20	06	28	21	-07	29	44	22	-07	37	50	-30	1
15	-11	27	04	07	22	07	28	24	01	35	48	29	-13	41	53	-19	2
11	-09	19	05	02	17	22	30	13	-08	21	27	16	-05	23	49	-23	3
-01	07	-01	-00	01	06	-05	-04	-02	-03	10	08	12	06	11	01	-10	4
06	-09	19	04	08	12	17	25	12	-01	13	14	09	-13	15	35	-18	5
28	-44	38	12	10	-06	06	12	23	02	05	05	02	-07	11	17	-10	6
-06	05	-08	01	-08	14	-03	04	-03	07	05	07	07	-07	05	-02	-04	7
-12	25	-08	-12	-05	18	18	11	-08	-09	-01	05	11	04	01	03	-11	8
25	-11	36	18	25	-01	09	26	25	06	09	25	14	-03	12	26	-07	9
33	-29	50	17	15	03	08	23	20	21	12	23	11	-11	18	14	01	10
-18	21	-26	-13	-14	-04	-15	-26	-13	-05	-05	01	00	-00	-04	-15	-10	11
-05	19	-18	-06	-05	10	-01	04	-08	-07	02	-04	02	12	-04	-01	06	12
-18	16	-24	-11	-13	06	-12	-14	-26	03	-01	-12	-09	03	-04	-12	01	13
10	-03	09	04	08	03	08	14	08	02	15	17	05	01	17	08	02	14
-40	42	-45	-12	-09	-01	-08	-23	-15	-16	-05	-16	00	16	-04	-11	-01	15
00	07	-02	-08	04	08	00	03	04	04	06	-01	04	-00	07	00	-03	16
04	-01	-04	02	-03	17	03	09	08	01	04	08	07	04	06	14	-07	17
--	-46	47	19	27	-03	14	20	27	10	03	06	00	-10	10	13	00	18
	--	-51	-11	-16	02	-13	-23	-28	-10	-07	-07	-03	13	-12	19	-08	19
		--	28	30	-09	19	37	37	18	09	27	11	-24	19	34	06	20
			--	22	-13	09	20	13	06	06	15	09	-06	06	11	04	21
				--	-13	09	16	33	06	05	14	09	-05	09	10	04	22
					--	10	17	-01	00	11	09	-01	04	07	16	-22	23
						--	20	13	-02	04	03	00	-06	-02	16	03	24
							--	20	16	17	18	12	-14	21	34	-06	25
								--	13	12	18	11	-09	18	22	-02	26
									---	-02	00	12	-06	01	04	02	27
										--	30	09	-22	65	19	-06	28
											--	37	-08	39	28	-10	29
												--	07	09	06	-05	30
													--	-23	-13	-02	32
														--	22	-05	33
															--	-13	34
																--	35

Variable Identification for Correlation Matrices[1]

Matrix Identification	Description
1	Occupational Aspiration Scale Scores
2	College Aspiration Level
3	C. F. I. Q. Scores
4	16 Personality Factor Test: Factor "A" (Cyclothymia vs. Schizothymia)[2]
5	16 PF: Factor "B" (General Intelligence vs. Mental Defect)
6	16 PF: Factor "C" (Emotional stability or ego strength vs. dissatisfied emotionality)
7	16 PF: Factor "E" (Dominance or Ascendance vs. Submission)
8	16 PF: Factor "F" (Surgency vs. desurgency, or depressive anxiety)
9	16 PF: Factor "G" (Character or super-ego strength vs. lack of internal standards)
10	16 PF: Factor "H" (Adventurous Autonomic resilience vs. inherent, withdrawn schizothymia)
11	16 PF: Factor "I" (Emotional sensitivity vs. tough maturity)
12	16 PF: Factor "L" (Paranoid schizothymia vs. trustful altruism)
13	16 PF: Factor "M" (Hysterical unconcern or "bohemianism", vs. practical concernedness)
14	16 PF: Factor "N" (Sophistication vs. rough simplicity)

1/ Based on coding key for card 1.14.

2/ First characteristic refers to high score

Matrix Identification	Description
15	16 PF: Factor "O" (Anxious insecurity vs. placid self-confidence)
16	16 PF: Factor "Q_1" (Radicalism vs. Conservativism)
17	16 PF: Factor "Q_2" (Independent self-sufficiency vs. lack of resolution)
18	16 PF: Factor "Q_3" (Will control and character stability)
19	16 PF: Factor "Q_4" (Nervous tension)
20	CTP: Total Adjustment Score
21	BVA 1 (Belief that work is of expressive value vs. instrumental value)3/
22	BVA 2 (Positive vs. negative evaluation of structured time)
23	BVA 3 (Positive vs. negative evaluation of physical mobility)
24	BVA 4 (Positive vs. negative evaluation of change)
25	BVA 5 (Belief in internal vs. external determination of events)
26	BVA 6 (Positive vs. negative evaluation of delayed gratification)
27	Occupational Crystallization (Certainty of occupational choice)
28	Father's educational status
29	Parental desire for ego's post-high school educational mobility
30	Parental desire for ego's high occupational achievement

3/ First characteristic refers to high score

Matrix Identification	Description
31	Parental desire for ego's high social status (Index based on no.'s 29 and 30 above)
32	Status Anxiety
33	Sewell S.E.S. scores
34	Grade Point Average: 1956 - 1957
35	Number of agricultural courses through 1957
36	Agricultural GPA through 1957

APPENDIX C

Questionnaire Forms and Coding Key

YOUR NAME_____

THE MSU WORK BELIEFS CHECK-LIST

Instructions:

This check-list is made up of statements people often say they believe.

You will probably find that you agree with some and disagree with others.

If you agree with a statement, circle Agree; if you disagree with a statement, circle Disagree. Do not omit any.

Be sure your name is on the top of this sheet.

1.1	The only purpose of working is to make money.	Agree	Disagree
1.2	I believe a man needs to work in order to feel that he has a real place in the world	Agree	Disagree
1.3	I feel sorry for people whose jobs require that they take orders from others.	Agree	Disagree
1.4	Every man should have a job that gives him a steady income.	Agree	Disagree
1.5	The happiest men are those who work only when they need money.	Agree	Disagree
1.6	Doing a good job day in and day out is one of the most satisfying experiences a man can have.	Agree	Disagree
1.7	A regular job is good for one.	Agree	Disagree
1.8	I feel sorry for rich people who never learn how good it is to have a steady job.	Agree	Disagree
2.1	I don't like people who are always right on time for every appointment they have.	Agree	Disagree
2.2	I feel sorry for people who have to do the same thing every day at the same time.	Agree	Disagree
2.3	I don't like to have to make appointments.	Agree	Disagree
2.4	I believe that promptness is a virtue.	Agree	Disagree
2.5	I usually schedule my activities.	Agree	Disagree
2.6	I'd rather let things happen in their own way rather than scheduling them by a clock.	Agree	Disagree
2.7	It makes me feel bad to be late for an appointment.	Agree	Disagree
2.8	I expect people who have appointments with me to be right on time.	Agree	Disagree
3.1	I would be unhappy living away from my relatives.	Agree	Disagree
3.2	I hope to move away from here within the next few years.	Agree	Disagree
3.3	People who can't leave their hometowns are hard for me to understand.	Agree	Disagree
3.4	A man's first loyalty should be to his home community.	Agree	Disagree
3.5	When a boy becomes a man, he should leave home.	Agree	Disagree
3.6	I like to see new things and meet new people.	Agree	Disagree

4.1	I like to try new things.	Agree Disagree
4.2	On the whole, the old ways of doing things are the best.	Agree Disagree
4.3	Life would be boring without new experiences.	Agree Disagree
4.4	I like people who are willing to change.	Agree Disagree
4.5	On the whole, most changes make things worse.	Agree Disagree
4.6	The happiest people are those who do things the way their parents did.	Agree Disagree
4.7	New things are usually better than old things.	Agree Disagree
5.1	I believe that a person can get anything he wants if he's willing to work for it.	Agree Disagree
5.2	Man should not work too hard, for his fortune is in the hands of God.	Agree Disagree
5.3	A man shouldn't work too hard because it won't do him any good unless luck is with him.	Agree Disagree
5.4	With a little luck I believe I can do almost anything I really want to do.	Agree Disagree
5.5	A person shouldn't hope for much in this life.	Agree Disagree
5.6	If a man can't better himself it's his own fault.	Agree Disagree
5.7	Practically everything I try to do turns out well for me.	Agree Disagree
5.8	I usually fail when I try something important.	Agree Disagree
6.1	I would rather work than go to school.	Agree Disagree
6.2	Money is made to spend, not to save.	Agree Disagree
6.3	I think there's something wrong with people who go to school for years when they could be out earning a living.	Agree Disagree
6.4	One gains more in the long run if he studies than if he gets a job.	Agree Disagree
6.5	The more school a person gets the better off he is.	Agree Disagree
6.6	Generally speaking, things one works hard for are the best.	Agree Disagree
6.7	When I get a little extra money I usually spent it.	Agree Disagree

SCORING KEY (Tentative) 1957-1960

MSU Work Beliefs Check-List

1. Underlined responses are scored one point; all others are scored zero points.

2. There is a score for each sub-area, six scores in all.

1.1	The only purpose of working is to make money.	Agree	Disagree
1.2	I believe a man needs to work in order to feel that he has a real place in the world.	Agree	Disagree
1.3	I feel sorry for people whose jobs require that they take orders from others.	Agree	Disagree
1.4	Every man should have a job that gives him a steady income.	Agree	Disagree
1.5	The happiest men are those who work only when they need money.	Agree	Disagree
1.6	Doing a good job day in and day out is one of the most satisfying experiences a man can have.	Agree	Disagree
1.7	A regular job is good for one.	Agree	Disagree
1.8	I feel sorry for rich people who never learn how good it is to have a steady job.	Agree	Disagree
2.1	I don't like people who are always right on time for every appointment they have.	Agree	Disagree
2.2	I feel sorry for people who have to do the same thing every day at the same time.	Agree	Disagree
2.3	I don't like to have to make appointments.	Agree	Disagree
2.4	I believe that promptness is a virtue.	Agree	Disagree
2.5	I usually schedule my activities.	Agree	Disagree
2.6	I'd rather let things happen in their own way rather than scheduling them by a clock.	Agree	Disagree
2.7	It makes me feel bad to be late for an appointment.	Agree	Disagree
2.8	I expect people who have appointments with me to be right on time.	Agree	Disagree

3.1	I would be unhappy living away from my relatives.	Agree	Disagree
3.2	I hope to move away from here within the next few years.	Agree	Disagree
3.3	People who can't leave their hometowns are hard for me to understand.	Agree	Disagree
3.4	A man's first loyalty should be to his home community.	Agree	Disagree
3.5	When a boy becomes a man, he should leave home.	Agree	Disagree
3.6	I like to see new things and meet new people.	Agree	Disagree
4.1	I like to try new things.	Agree	Disagree
4.2	On the whole, the old ways of doing things are the best.	Agree	Disagree
4.3	Life would be boring without new experiences.	Agree	Disagree
4.4	I like people who are willing to change.	Agree	Disagree
4.5	On the whole, most changes make things worse.	Agree	Disagree
4.6	The happiest people are those who do things the way their parents did.	Agree	Disagree
4.7	New things are usually better than old things.	Agree	Disagree
5.1	I believe that a person can get anything he wants if he's willing to work for it.	Agree	Disagree
5.2	Man should not work too hard, for his fortune is in the hands of God.	Agree	Disagree
5.3	A man shouldn't work too hard because it won't do him any good unless luck is with him.	Agree	Disagree
5.4	With a little luck I believe I can do almost anything I really want to do.	Agree	Disagree
5.5	A person shouldn't hope for much in this life.	Agree	Disagree
5.6	If a man can't better himself it's his own fault.	Agree	Disagree
5.7	Practically everything I try to do turns out well for me.	Agree	Disagree
5.8	I usually fail when I try something important.	Agree	Disagree
6.1	I would rather work than go to school.	Agree	Disagree
6.2	Money is made to spend, not to save.	Agree	Disagree
6.3	I think there's something wrong with people who go to school for years when they could be out earning a living.	Agree	Disagree

6.4	One gains more in the long run if he studies than if he gets a job.	Agree	Disagree
6.5	The more school a person gets the better off he is.	Agree	Disagree
6.6	Generally speaking, things one works hard for are the best.	Agree	Disagree
6.7	When I get a little extra money I usually spend it.	Agree	Disagree

MICHIGAN STATE UNIVERSITY

DEPARTMENT OF SOCIOLOGY
AND ANTHROPOLOGY.

THE OCCUPATIONAL PLANS OF MICHIGAN YOUTH

Dear Student:

This survey is an attempt to get a better picture of the problems you young people face in choosing your life's occupation, and the attitudes you have towards these problems. By carefully filling out this questionnaire you will help us to gain a better understanding of how these problems look from where you stand. This information will be of great value in developing counseling programs for high school youth. For this reason we are anxious to have you answer the questions on this form to the best of your ability.

PLEASE FOLLOW THE DIRECTIONS:

1. Read each item carefully. Answer to the best of your knowledge.
2. Be sure to answer each question. Where there are brackets, fill in an "X". Be sure that your "X" is squarely in the proper bracket before your choice. Where only a space is left, enter the word or figures called for. If you cannot answer the question, write "I do not know."
3. There are several questions which refer to your parents. If for any reason you are not living with your parents, answer for the person who acts as your parent or guardian.
4. If you have any comment to make, if you did not understand any item, if your attitudes differ from those given, or if you have problems which we failed to mention, write about them on the margin close to the items near them in meaning.

I. ABOUT MYSELF

1. MY NAME IS _____ .

2. MY ADDRESS IS: _____ .

3. MY AGE (to nearest birthday) IS: _____.

. THE DATE OF MY BIRTH WAS _____.
Month Day Year

4. MY SEX IS: ( ) male ( ) female

5. I AM A: ( ) junior ( ) senior

6. I MAKE MY REGULAR HOME WITH:
( ) my own parents.
( ) a parent and a step-parent.
( ) one parent only.
( ) my grandparents.
( ) an uncle or aunt.
( ) other (specify)_____ .

7. MY CHURCH PREFERENCE IS:_____.
   Member: ( ) yes ( ) no.
8. THE NAME OF MY HIGH SCHOOL IS:_____.

9. THE NUMBER OF YEARS I HAVE ATTENDED THIS HIGH SCHOOL IS:_____.

10. THE KINDS OF EXTRA CURRICULAR ACTIVITIES IN WHICH I PARTICIPATE ARE:
    (Check the ones in which you participate regularly, and add to the list if necessary.)

( ) athletics.	( ) annual.
( ) band-orchestra.	( ) student government.
( ) chorus-vocal.	( ) hobby club.
( ) dramatics.	( ) other_____.
( ) debates.	( ) _____.
( ) 4-H or FFA.	( ) _____.
( ) school paper.	( ) _____.

11. COMPARED TO MOST STUDENTS IN MY HIGH SCHOOL, MY LEADERSHIP ACTIVITIES ARE:
    ( ) greater than average.
    ( ) about average.
    ( ) less than average.

12. I LIVE:
    ( ) on a farm.
    ( ) in the open country but not on a farm.
    ( ) in a village under 2,500.
    ( ) in a town of 2,500 - 10,000.
    ( ) in a city over 10,000.

13. AS TO WORKING WHILE I AM IN HIGH SCHOOL:
    ( ) I have a fairly regular job outside my family and home.
    ( ) I sometimes work outside my family and home.
    ( ) I do not work outside my family and home.

14. OF ALL THE MEN I KNOW WELL, THE ONES I ADMIRE MOST ARE:

Their names	Their exact occupations (their job titles, not the company they work for)	Their relationship to me (Friend, relative, teacher, minister, etc.)
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

15. THE NAMES OF MY BEST FRIENDS ARE:

1. _____

2. _____

3. _____

4. _____

5. _____

II. ABOUT MY CHOICE OF A LIFE'S OCCUPATION

1. THE OCCUPATIONS WHICH I HAVE THOUGHT ABOUT GOING INTO ARE:

1. _____ 2. _____

3. _____ 4. _____

2. THE OCCUPATION THAT I PLAN TO FOLLOW IS: _____
(Indicate particular type of job.)

3. IN REGARD TO MY CHOICE OF MY OCCUPATION:
( ) I feel sure that my mind is made up.
( ) I'm not too sure, but I think my mind is made up.
( ) I'm not sure that my mind is made up.

4. IN REGARD TO MY CHOICE OF AN OCCUPATION:

( ) I have given the matter a great deal of thought.
( ) I have given the matter some thought.
( ) I have given the matter little thought.

5. AS TO MY KNOWLEDGE OF THE WORK I INTEND TO ENTER:
( ) I have good knowledge because I have worked at it.
( ) I have good knowledge because I have relatives or friends who work at it.
( ) I have a general knowledge, but don't know much about the details of it.
( ) I don't know much about it yet, but will find out by experience on the job.
( ) I don't know much about it yet, but will find out when I go on to school.
( ) I don't know because I have not yet made a choice.

6. FOR THE OCCUPATION I HAVE CHOSEN I THINK MY ABILITY IS:
( ) very much above average.
( ) somewhat above average.
( ) just average.
( ) somewhat below average.
( ) very much below average.
( ) I don't know because I have not yet made a choice.

7. COMPARED WITH MY FRIENDS, I THINK MY CHANCES FOR GETTING AHEAD IN THE OCCUPATION OF MY CHOICE ARE:
   ( ) very much above average.
   ( ) somewhat above average.
   ( ) just average.
   ( ) somewhat below average.
   ( ) very much below average.

8. IN THE OCCUPATION I HAVE CHOSEN I CAN EXPECT HELP IN GETTING STARTED:
   ( ) from my father or mother who is in this type of work.
   ( ) from relatives who are in this type of work.
   ( ) from friends who are in this type of work.
   ( ) from no one.

   ( ) I don't know because I have not made my choice yet.

9. AS TO FOLLOWING HIS OCCUPATION, (FOR BOYS ONLY) MY FATHER HAS:
   ( ) tried to encourage me.
   ( ) neither tried to encourage or discourage me.
   ( ) tried to discourage me.

10. IN THIS QUESTION EACH LINE PRESENTS TWO FACTS PEOPLE CONSIDER WHEN THEY CHOOSE A JOB. YOU ARE TO UNDERLINE THE FACT YOU BELIEVE TO BE THE MORE IMPORTANT OF THE TWO IN CHOOSING YOUR JOB.

    1. Fact 1: The money you can make.
       Fact 2: The difficulty in getting the required education.

    2. Fact 1: The working hours.
       Fact 2: The social standing of the occupation.

    3. Fact 1: The good you can do
       Fact 2: The difficulty in getting the required education.

    4. Fact 1: The good you can do
       Fact 2: The social standing of the occupation

    5. Fact 1: The working hours
       Fact 2: The money you can make

    6. Fact 1: The money you can make
       Fact 2: The good you can do

    7. Fact 1: The social standing of the occupation
       Fact 2: The money you can make

    8. Fact 1: The good you can do
       Fact 2: The working hours

    9. Fact 1: The working hours
       Fact 2: The difficulty in getting the required education

    10. Fact 1: The difficulty in getting the required education
        Fact 2: The social standing of the occupation

11. IF I WERE ABSOLUTELY FREE TO GO INTO ANY KIND OF WORK I WANTED, MY CHOICE WOULD BE: _____.

12. THE TYPE OF WORK I WOULD LIKE TO BE DOING WHEN I AM 30 YEARS OLD IS: _____.

13. REGARDING MY PLANS FOR EDUCATION AFTER I LEAVE HIGH SCHOOL
    ( ) I plan to get more education after high school
    ( ) I do not plan to get more education after high school

IF PLANNING TO GET MORE EDUCATION:

1. THE NUMBER OF YEARS OF FURTHER EDUCATION I PLAN TO GET IS:
   ( ) two years or less
   ( ) three or four years
   ( ) five or six years
   ( ) seven or more years

2. THE NAMES AND LOCATIONS OF THE SCHOOLS I AM THINKING ABOUT ATTENDING ARE:

	Name of School	Location of School
(1)		
(2)		
(3)		

3. THE COURSES OF STUDY I AM THINKING ABOUT TAKING ARE:

   (1) _____

   (2) _____

   (3) _____

4. AS FAR AS I KNOW NOW, THE HIGHEST DEGREE I HOPE TO EARN IS:

   ( ) none
   ( ) bachelor's degree
   ( ) master's degree
   ( ) doctor's degree
   ( ) other degree

   IF OTHER DEGREE

   THE DEGREE I HOPE TO GET IS:

   _____

III. ABOUT MY PARENTS

1. MY PARENTS ARE:

( ) both living together.
( ) both dead.
( ) father is dead.
( ) mother is dead.
( ) divorced.
( ) separated.

1A. MY FATHER'S FULL NAME IS: _____

1B. MY MOTHER'S FULL NAME IS: _____

2. MY MOTHER:

( ) has no job outside the home.
( ) has a part-time job outside the home.
( ) has a full-time job outside the home.

3. MY FATHER'S OCCUPATION IS: (or was, if dead or retired) (Specify the kind of work he does and not where he works.) _____

_____.

IF FATHER IS A FARMER
MY FATHER IS: ( ) owner ( ) renter ( ) laborer

THE NUMBER OF ACRES MY FATHER OPERATES IS: _____.

4. MY FATHER CONSIDERS HIS OCCUPATION TO BE:

( ) completely satisfactory.
( ) fairly satisfactory.
( ) good enough.
( ) not very good.
( ) very poor.

5. MY MOTHER CONSIDERS MY FATHER'S OCCUPATION TO BE:

( ) completely satisfactory.
( ) fairly satisfactory.
( ) good enough.
( ) not very good.
( ) very poor.

6. THE OCCUPATION OF MY FATHER'S FATHER WAS: _____.

7. THE OCCUPATION OF MY MOTHER'S FATHER WAS: _____.

8. THE COUNTRY OF BIRTH OF MY FATHER WAS: _____.

9. THE COUNTRY OF BIRTH OF MY MOTHER WAS: _____.

10. THE COUNTRY OF BIRTH OF MY FATHER'S FATHER WAS: _____.

11. THE COUNTRY OF BIRTH OF MY MOTHER'S FATHER WAS: _____.

12. MY FATHER'S EDUCATION CONSISTED OF:

( ) less than 8 grades.
( ) 8 grades.
( ) 9-11 grades.
( ) 12 grades.
( ) some college.
( ) college degree.

13. MY MOTHER'S EDUCATION CONSISTED OF:

( ) less than 8 grades.
( ) 8 grades.
( ) 9 - 11 grades.
( ) 12 grades.
( ) some college.
( ) college degree.

14. I BELIEVE MY FATHER'S EDUCATION IS:
( ) completely satisfactory.
( ) fairly satisfactory.
( ) good enough.
( ) not very good.
( ) very poor.

15. MY FATHER THINKS THAT THE EDUCATION HE OBTAINED IS:

( ) completely satisfactory.
( ) fairly satisfactory.
( ) good enough.
( ) not very good.
( ) very poor.

16. IN COMPARISON TO THE INCOME OF THE PARENTS OF OTHER STUDENTS IN THE HIGH SCHOOL THE INCOME OF MY PARENTS IS:

( ) one of the highest incomes.
( ) higher than average.
( ) just average.
( ) less than average.
( ) one of the lowest incomes.

17. MY PARENTS ARE CONSIDERED BY MOST PEOPLE IN THE COMMUNITY TO BE:

( ) very important people.
( ) rather important people.
( ) just average people.
( ) of less than average importance.
( ) not at all important

IV. ABOUT ME AND MY PARENTS

1. AS TO CONTINUING MY EDUCATION BEYOND HIGH SCHOOL MY FATHER:

( ) has strongly encouraged me to continue.
( ) has given me some encouragement to continue.
( ) has never said much about it.
( ) feels that I would be better of going to work after high school.
( ) feels that I should quit high school and go to work.

2. AS TO CONTINUINGMY EDUCATION BEYOND HIGH SCHOOL MY MOTHER:

( ) has strongly encouraged me to continue.
( ) has given me some encouragement to continue.
( ) has never said much about it.
( ) feels that I would be better off going to work after high school.
( ) feels that I should quit high school and go to work.

3. AS TO ANY FURTHER HELP FROM MY FOLKS IN GETTING A START OR IN CONTINUING MY SCHOOLING AFTER HIGH SCHOOL, MY PARENTS WOULD BE:

( ) financially able to help me a great deal.
( ) financially able to give me some help.
( ) financially able to give me no help.

4. AS TO FURTHER HELP FROM MY PARENTS AFTER I FINISH HIGH SCHOOL, MY PARENTS WOULD BE:

( ) willing to help me a great deal.
( ) willing to give me some help.
( ) willing to give me no help.

5. AS TO THE KIND OF JOB I GO INTO, MY FATHER:

( ) wants me to have a very important job.
( ) wants me to have a job that is quite a bit better than most jobs around here.
( ) wants me to have a job that is a little bit better than most jobs around here.
( ) feels that the job I take should be as good as most jobs around here.
( ) does not care how good the job I go into is.

6. AS TO THE KIND OF JOB I GO INTO,MY MOTHER:

( ) wants me to have a very important job.
( ) wants me to have a job that is quite a bit better than most jobs around here.
( ) wants me to have a job that is a little bit better than most jobs around here.
( ) feels that the job I take should be as good as most jobs around here.
( ) does not care how good the job I go into is.

7. MY FAMILY IS TOO POOR TO BUY ME THE KIND OF THINGS I NEED:

( ) Yes ( ) No

8. THE GIRLS I WOULD LIKE TO DATE PREFER TO GO OUT WITH BOYS WHOSE FAMILIES ARE MORE IMPORTANT THAN MINE.

( ) Yes ( ) No

9. I OFTEN WISH MY FATHER (OR MOTHER OR GUARDIAN) HAD A BETTER JOB.

( ) yes ( ) No

10. I OFTEN WISH MY FATHER WAS A MORE IMPORTANT MAN IN THE COMMUNITY. THAN HE IS.

( ) Yes ( ) No

V. ABOUT MY BROTHERS AND SISTERS

(Write "0" if your answer is "none".)

1. THE NUMBER OF OLDER BROTHERS I HAVE IS:_____.

2. THE NUMBER OF YOUNGER BROTHERS I HAVE IS:_____.

3. THE NUMBER OF OLDER SISTERS I HAVE IS:_____.

4. THE NUMBER OF YOUNGER SISTERS I HAVE IS:_____.

5. THE NUMBER OF MY OLDER BROTHERS AND SISTERS THAT GRADUATED FROM HIGH SCHOOL IS:_____.

6. THE NUMBER THAT QUIT SCHOOL BEFORE GRADUATING FROM HIGH SCHOOL IS:_____.

7. THE NUMBER THAT HAVE ATTENDED OR ARE ATTENDING COLLEGE IS:_____.

8. BELOW IS THE NAME, SEX, AGE, OCCUPATION AND PLACE OF RESIDENCE OF EACH OF MY BROTHERS AND SISTERS: (Start with the oldest brother or sister and include all brothers and sisters. If in school, put "student." If sister is married and not working outside the home, put "housewife.")

	Name	Male or Female	Age	Occupation	Place of Residence (town and state)
1.					
2.					
3.					
4.					
5.					
6.					

IF YOU HAVE A BROTHER OR SISTER (or more)

9. COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY FATHER WAS:

( ) **much** more interested in what I did.
( ) a little more interested in what I did.
( ) just about equally interested in what each of us did.
( ) a little less interested in what I did.
( ) much less interested in what I did.

10. COMPARED TO MOST OF MY BROTHERS, I BELIEVE MY MOTHER WAS:

( ) much more interested in what I did.
( ) a little more interested in what I did.
( ) just about equally interested in what each of us did.
( ) a little less interested in what I did.
( ) much less interested in what I did.

11. COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY FATHER WAS:

( ) much kinder to me.
( ) a little kinder to me.
( ) about equally kind to each of us.
( ) a little less kind to me.
( ) much less kind to me.

12. COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY MOTHER WAS:

( ) much kinder to me.
( ) a little kinder to me.
( ) about equally kind to each of us.
( ) a little less kind to me.
( ) much less kind to me.

13. COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY FATHER WAS:

( ) much more attentive to me.
( ) a little more attentive to me.
( ) about equally attentive to each of us.
( ) a little less attentive to me.
( ) much less attentive to me.

14. COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY MOTHER WAS:

( ) much more attentive to me.
( ) a little more attentive to me.
( ) about equally attentive to each of us.
( ) a little less attentive to me.
( ) much less attentive to me.

15. USUALLY I WAS:

( ) much more interested in most of my brothers and sisters than they were in me.
( ) a little more interested in most of my brothers and sisters than they were in me.
( ) about as interested in my brothers and sisters as they were in me.
( ) a little less interested in most of my brothers and sisters than they were in me.
( ) much less interested in most of my brothers and sisters than they were in me.

VI. ABOUT MY HOUSE

1. OUR HOME IS: ( ) owned ( ) rented.

2. THE NUMBER OF PERSONS WHO LIVE AT OUR HOUSE IS: _____.

3. THE NUMBER OF ROOMS IN OUR HOUSE IS: _____.
(Do not include basements, bathrooms, porches, closets, halls.)

4. THE CONSTRUCTION OF OUR HOUSE IS:

( ) brick.
( ) unpainted frame.
( ) painted frame.
( ) other (specify) _____.

5. THE LIGHTING IN OUR HOUSE IS:

( ) oil lamps.
( ) electric.
( ) gas, mantle, or pressure lamps.
( ) other or none.

6. THE KIND OF REFRIGERATOR WE HAVE IS:

( ) ice.
( ) mechanical (gas or electric).
( ) other or none.

7. WE HAVE A DEEP FREEZE LOCKER AT OUR HOME: ( ) yes ( ) no.

8. WE HAVE RUNNING WATER IN OUR HOUSE: ( ) yes ( ) no.

9. WE TAKE A DAILY NEWSPAPER: ( ) yes ( ) no.

10. WE HAVE A POWER WASHING MACHINE: ( ) yes ( ) no.

11. WE HAVE A RADIO: ( ) yes ( ) no.

12. WE HAVE A CAR (other than truck): ( ) yes ( ) no.

13. WE HAVE A TELEPHONE: ( ) yes ( ) no.

14. MY FATHER GOES TO CHURCH AT LEAST ONCE A MONTH: ( ) yes ( ) no.

15. MY MOTHER GOES TO CHURCH AT LEAST ONCE A MONTH: ( ) yes ( ) no.

(GO BACK AND CHECK TO SEE IF YOU HAVE ANSWERED EVERY QUESTION.)

THANK YOU.

Department of Sociology
and Anthropology,
Michigan State University

Key, Michigan 1
A. O. Haller

LENAWEE COUNTY STUDY OF 17 YR. OLD BOYS
Spring and Summer, 1957

Card 1.1: I.Q. Scores-- IPAT, Test of G: Culture Free Scale 3A, by R.B. Cattell and A.K.S. Cattell, 1950.

Column No.

1.1.1-2 Card identification—two digit field (2df)
01- Card 1.1 (This card is punched 01)
02- Card 1.2
03- Card 1.3
:
nn- Card 1.nn

1.1.3-5 Person identification— 3 df

1.1.6-7 School identification— 2 df

01- Addison	07- Deerfield
02- Adrian	08- Hudson
03- Blissfield	09- Morenci
04- Britton	10- Onsted
05- Catholic Central (Adrian)	11- Sand Creek
06- Clinton	12- Tecumseh

1.1.8 Test 1, question 1 (T1, q1.)
0- wrong
1- right
Y- no answer

1.1.9 T1, q2: see 1.1.8

1.1.10 T1, q3: ditto

1.1.11 T1, q4: ditto

1.1.12 T1, q5: ditto

1.1.13 T1, q6: ditto

1.1.14 T1, q7: ditto

1.1.15 T1, q8: ditto

1.1.16 T1, q9: ditto

1.1.17 T1, q10: ditto

1.1.18 T1, q11: ditto

1.1.19 T1, q12: ditto

1.1.20 T1, q13: ditto

1.1.21 T2, q1: see 1.1.8

1.1.22 Blank

1.1.23 T2, q2: ditto

1.1.24 T2, q3: ditto

1.1.25 T2, q4: ditto

1.1.26 T2, q5: ditto

1.1.27 T2, q6: ditto

1.1.28 T2, q7: ditto

1.1.29 T2, q8: ditto

1.1.30 T2, q9: ditto

1.1.31 T2, q10: ditto

1.1.32 T2, q11: ditto

1.1.33 T2, q12: ditto

1.1.34 T2, q13: ditto

1.1.35 T2, q14: ditto

1.1.36 T3, q1: ditto

1.1.37 Blank

1.1.38 T3, q2: ditto

1.1.39 T3, q3: ditto

1.1.40 T3, q4: ditto

1.1.41 T3, q5: ditto

1.1.42 T3, q6: ditto

1.1.43 T3, q7: ditto

1.1.44 T3, q8: ditto

1.1.45 T3, q9: ditto

1.1.46 T3, q10: ditto

1.1.47 T3, q11: ditto

1.1.48 T3, q12: ditto

1.1.49 T3, q13: ditto

1.1.50 T4, q1: see 1.1.8

1.1.51 T4, q2: ditto

1.1.52 T4, q3: ditto

1.1.53 T4, q4: ditto

1.1.54 T4, q5: ditto

1.1.55 T4, q6: ditto

1.1.56 T4, q7: ditto

1.1.57 T4, q8: ditto

1.1.58 T4, q9: ditto

1.1.59 T4, q10: ditto

1.1.60-61 Test 1 total score 2df
00- zero points
01- one point
:
13- thirteen points
YY- test not attempted

1.1.62-63 Test 2 total score 2df
00- zero points
01- one point
:
14- fourteen points
YY- test not attempted

1.1.64-65 Test 3 total score 2df
00- zero points
01- one point
:
13- thirteen points
YY- test not attempted

1.1.66-67 Test 4 total score 2df
00- zero points
01- one point
:
10- ten points
YY- test not attempted

1.1.68-69 Total raw score 2df
00- zero points
01- one point
:
50- fifty points
YY- test 1, test 2, test 3, or test 4, not attempted

1.1.70-72 Total I.Q. score 3 df
000- zero points
001- one point
:
999- nine hundred, ninty-nine
YYY- Test 1, Test 2, Test 3, or Test 4, not attempted

Card 1.2: Occupational Aspiration Scale Scores
A. O. Haller, 1957

Column No.

1.2.1-2 Card identification 2 df
01- Card 1.1
02- Card 1.2
03- Card 1.3
:
nn- Card 1.nn

1.2.3-5 Person identification 3 df

1.2.6 Question 1: First Score for realistic choice level at end of schooling
0- zero points
1- one point
:
9- nine points
Y- no answer

1.2.7 Question 2: First Score for idealistic choice level at end of schooling
See 1.2.6

1.2.8 Question 3: Second Score for realistic choice level at end of schooling
See 1.2.6

1.2.9 Question 4: Second Score for idealistic choice level at end of schooling
see 1.2.6

1.2.10 Question 5: First score for realistic choice level at age 30
see 1.2.6

1.2.11 Question 6: First score for idealistic choice level at age 30
see 1.2.6

1.2.12 Question 7: Second score for realistic choice level at age 30
see 1.2.6

1.2.13 Question 8: Second score for idealistic choice level at age 30

1.2.14-15 Sum of scores for Questions 1 and 3: realistic choice level at end of schooling 2 df
00- zero points
01- one point
:
18- eighteen points
YY- no answer

1.2.16-17 Sum of scores for Questions 2 and 4: idealistic choice level at end of schooling 2 df
see 1.2.14-15

1.2.18-19 Sum of scores for Questions 5 and 7: realistic choice level at age 30
see 1.2.14-15

1.2.20-21 Sum of scores for Questions 6 and 8: idealistic choice level at age 30
see 1.2.14-15

1.2.22-23 Sum of scores for Questions 1, 3, 5, and 7: realistic choice level
00- zero points
01- one point
:
36- thirty-six points
YY- no answer

1.2.24-25 Sum of scores for Questions 2, 4, 6, and 8: idealistic choice level
00- zero points
01- one point
:
36- thirty-six points
YY- no answer

1.2.26-27 Sum of scores for Questions 1 through 8: level of occupational aspiration
00- zero points
01- one point
:
72- seventy-two points
YY- no answer

1.2.28-29 BLANK

1.2.30-31 Sum of T-scores for Questions 1 through 8: level of occupational aspiration
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.32-33 Question 1: First T-score for realistic choice level at end of schooling
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.34-35 Question 2: First T-score for idealistic choice level at end of schooling
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.36-37 Question 3: Second T-score for realistic choice level at end of schooling
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

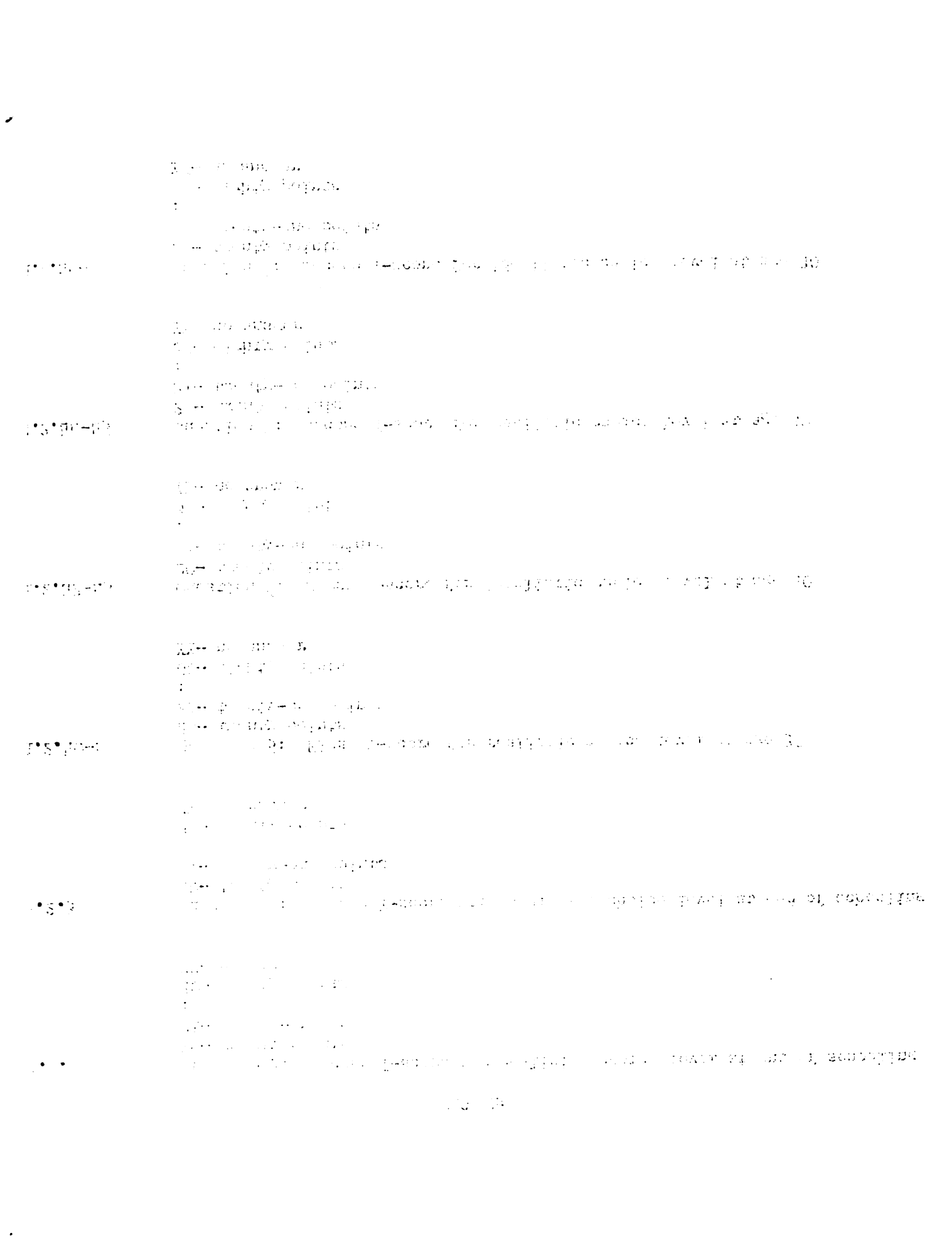
1.2.38-39 Question 4: Second T-score for idealistic choice level at end of schooling
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.40-41 Question 5: First T-score for realistic choice level at age 30
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.42-43 Question 6: First T-score for idealistic choice level at age 30
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.44-45 Question 7: Second T-score for realistic choice level at age 30
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer

1.2.46-47 Question 8: Second T-score for idealistic choice level at age 30
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no answer



Column No.

1.2.48-49 T-scores for realistic choice level at end of schooling. (2df)
Computed from 1.2.14-15

20 - twenty points
21 - twenty-one points
:
80 - eighty points
yy - no answer

1.2.50-51 T-scores: Idealistic choice level at end of schooling. (2df)
Computed from 1.2.16-17 See 1.2.48-49

1.2.52-53 T-scores: Realistic choice level at age 30. (2df)
Computed from 1.2.18-19 See 1.2.48-49

1.2.54-55 T-scores: Idealistic choice level at age 30. (2df)
Computed from 1.2.20-21 See 1.2.48-49

1.2.56-57 T-scores: Realistic choice level. (2df)
Computed from 1.2.22-23 See 1.2.48-49

1.2.58-59 T-scores: Idealistic choice level. (2df)
Computed from 1.2.24-25 See 1.2.48-49

1.2.60-61 Sum of scores for questions 1, 2, 5, 6: Split-half A
00 - zero points
01 - one point
:
36 - thirty-six points
YY - no answer to one or all of Q 1, 2, 5, 6

1.2.62-63 Sum of scores for questions 3, 4, 7, 8: Split-half B
See 1.2.60-61

1.2.64-65 T-Scores: Split-half A
Computed from 1,2,60-61
20 - twenty points
21 - twenty-one points
:
80 - eighty points
YY - no answer to one or all of summed questions

1.2.66-67 T-Scores: Split-half B
Computed from 1.2.62-63
See 1.2.64-65

Card 1.3 IPAT, The 16 P.F. Test, Form B, 1950

Column No.

1.3.1-2 Card identification 2 df
01- card 1.1
02- card 1.2
03- card 1.3 (This card is punched 03)
:
nn- card 1.nn

1.3.3-5 Person identification 3 df

1.3.6 Question 1 (q1)
0- zero points
1- one point
2- two points
Y- no answer

1.3.7	q2	ditto	1.3.26	q21,	ditto
1.3.8	q3	ditto	1.3.27	q22	ditto
			1.3.28	q23	ditto
1.3.9	q4	ditto			
			1.3.29	q24	ditto
1.3.10	q5	ditto			
			1.3.30	q25	
1.3.11	q6	ditto		0- zero points	
				1- one point	
1.3.12	q7	ditto		Y- no answer	
1.3.13	q8	ditto	1.3.31	q26	see 1.3.6
1.3.14	q9	ditto	1.3.32	q27	ditto
1.3.15	q10	ditto	1.3.33	q28	ditto
1.3.16	q11	ditto	1.3.34	q29	ditto
1.3.17	q12	ditto	1.3.35	q30	ditto
1.3.18	q13	ditto	1.3.36	q31	ditto
1.3.19	q14	ditto	1.3.37	q32	ditto
1.3.20	q15	ditto	1.3.38	q33	ditto
1.3.21	q16	ditto	1.3.39	q34	ditto
1.3.22	q17	ditto	1.3.40	q35	ditto
1.3.23	q18	ditto	1.3.41	q36	ditto
1.3.24	q19	ditto	1.3.42	q37	ditto
1.3.25	q20	ditto	1.3.43	q38	ditto

1.3.44	q39	see 1.3.6
1.3.45	q40	ditto
1.3.46	q41	ditto
1.3.47	q42	ditto
1.3.48	q43	ditto
1.3.49	q44	ditto
1.3.50	q45	ditto
1.3.51	q46	ditto
1.3.52	q47	ditto
1.3.53	q48	see 1.3.30
1.3.54	q49	see 1.3.6
1.3.55	q50	ditto
1.3.56	q51	ditto
1.3.57	q52	ditto
1.3.58	q53	ditto
1.3.59	q54	ditto
1.3.60	q55	ditto
1.3.61	q56	ditto
1.3.62	q57	ditto
1.3.63	q58	ditto
1.3.64	q59	ditto
1.3.65	q60	ditto
1.3.66	q61	ditto
1.3.67	q62	ditto
1.3.68	q63	ditto
1.3.69	q64	ditto
1.3.70	q65	ditto
1.3.71	q66	ditto
1.3.72	q67	ditto
1.3.73	q68	ditto
1.3.74	q69	ditto
1.3.75	q70	ditto
1.3.76	q71	ditto
1.3.77	q72	ditto
1.3.78	q73	see 1.3.30
1.3.79	q74	see 1.3.6
1.3.80	q75	ditto

Card 1.4 IPAT, The 16 P.F. Test, Form B, 1950 (continued from Card 1.3)

Column No.

1.4.1-2 Card identification 2 df
01- card 1.1
02- card 1.2
:
04- card 1.4 (this card is punched 04)
:
nn- card 1.nn

1.4.3-5 Person identification 3 df

1.4.6	Question 76	see 1.3.6			
1.4.7	q77	ditto	1.4.29	q99	see 1.3.6
1.4.8	q78	ditto	1.4.30	q100	ditto
1.4.9	q79	ditto	1.4.31	q101	ditto
1.4.10	q80	ditto	1.4.32	q102	ditto
1.4.11	q81	ditto	1.4.33	q103	ditto
1.4.12	q82	ditto	1.4.34	q104	see 1.3.30
1.4.13	q83	ditto	1.4.35	q105	see 1.3.6
1.4.14	q84	ditto	1.4.36	q106	see 1.3.30
1.4.15	q85	ditto	1.4.37	q107	see 1.3.6
1.4.16	q86	ditto	1.4.38	q108	ditto
1.4.17	q87	ditto	1.4.39	q109	ditto
1.4.18	q88	ditto	1.4.40	q110	ditto
1.4.19	q89	ditto	1.4.41	q111	ditto
1.4.20	q90	ditto	1.4.42	q112	ditto
1.4.21	q91	ditto	1.4.43	q113	ditto
1.4.22	q92	ditto	1.4.44	q114	ditto
1.4.23	q93	ditto	1.4.45	q115	ditto
1.4.24	q94	ditto	1.4.46	q116	ditto
1.4.25	q95	ditto	1.4.47	q117	ditto
1.4.26	q96	ditto	1.4.48	q118	ditto
1.4.27	q97	ditto	1.4.49	q119	ditto
1.4.28	q98	ditto	1.4.50	q120	ditto

1.4.51	q121	see 1.3.6
1.4.52	q122	see 1.3.30
1.4.53	q123	see 1.3.6
1.4.54	q124	ditto
1.4.55	q125	ditto
1.4.56	q126	ditto
1.4.57	q127	see 1.3.30
1.4.58	q128	see 1.3.6
1.4.59	q129	see 1.3.6
1.4.60	q130	ditto
1.4.61	q131	ditto
1.4.62	q132	ditto
1.4.63	q133	see 1.3.30
1.4.64	q134	see 1.3.6
1.4.65	q135	ditto
1.4.66	q136	ditto
1.4.67	q137	ditto
1.4.68	q138	ditto
1.4.69	q139	ditto
1.4.70	q140	ditto
1.4.71	q141	ditto
1.4.72	q142	ditto
1.4.73	q143	ditto
1.4.74	q144	ditto
1.4.75	q145	ditto
1.4.76	q146	ditto
1.4.77	q147	see 1.3.30
1.4.78	q148	see 1.3.6
1.4.79	q149	ditto
1.4.80	q150	ditto

Card 1.5 IPAT, The 16 P.F. Test, Form B, 1950 (continued from Cards 1.3 and 1.4)

Column No.					
1.5.1-2	Card identification 2 df 01- card 1.1 02- card 1.2 : 05- card 05 (This card is punched 05) : nn- card nn				
1.5.3-5	Person identification 3 df				
1.5.6	Question 151	see 1.3.6			
1.5.7	q152	ditto	1.5.27	q172	see 1.3.6
1.5.8	q153	ditto	1.5.28	q173	see 1.3.30
1.5.9	q154	ditto	1.5.29	q174	see 1.3.6
1.5.10	q155	ditto	1.5.30	q175	see 1.3.30
1.5.11	q156	ditto	1.5.31	q176	see 1.3.6
1.5.12	q157	ditto	1.5.32	q177	see 1.3.30
1.5.13	q158	ditto	1.5.33	q178	see 1.3.6
1.5.14	q159	ditto	1.5.34	q179	ditto
1.5.15	q160	ditto	1.5.35	q180	ditto
1.5.16	q161	ditto	1.5.36	q181	ditto
1.5.17	q162	ditto	1.5.37	q182	see 1.3.30
1.5.18	q163	ditto	1.5.38	q183	see 1.3.6
1.5.19	q164	ditto	1.5.39	q184	ditto
1.5.20	q165	ditto	1.5.40	q185	ditto
1.5.21	q166	ditto	1.5.41	q186	ditto
1.5.22	q167	ditto	1.5.42	q187	ditto
1.5.23	q168	ditto	1.5.43-44	Factor A, raw score 2 df (Cyclothymia vs. Schitzothymia	
1.5.24	q169	ditto		00- zero	
1.5.25	q170	ditto		: 20- twenty	
1.5.26	q171	ditto		YY- one or more questions unanswered	

1.5.45-46 Factor B, raw score 2 df (General intelligence vs mental defect)
00- zero
:
13- thirteen
YY- one or more questions unanswered

1.5.47-48 Factor C, raw score 2 df (Emotional stability or ego strength vs dissatisfied emotionality)
00- zero
:
26- twenty-six
YY- one or more questions unanswered

1.5.49-50 Factor E, raw score 2 df (Dominance or Ascendance vs Submission)
see 1.5.47-48

1.5.51-52 Factor F, raw score 2 df (Surgency vs desurgency, or depressive anxiety) see 1.5.47-48

1.5.53-54 Factor G, raw score 2 df (Character or super-ego strength vs. lack of internal standards)
see 1.5.43-44

1.5.55-56 Factor H, raw score 2 df (Adventurous autonomic resilience vs. inherent, withdrawn schizothymia)
see 1.5.47-48

1.5.57-58 Factor I, raw score 2 df (Emotional sensitivity vs. tough maturity)
see 1.5.43-44

1.5.59-60 Factor L., raw score 2 df (Paranoid schizothymia vs trustful altruism)
see 1.5.43-44

1.5.61-62 Factor M, raw score 2 df (Hysteric unconcern or "bohemianism," vs practical concernedness)
see 1.5.47-48

1.5.63-64 Factor N, raw score 2 df (Sophistication vs. rough simplicity)
see 1.5.43-44

1.5.65-66 Factor O., raw scores 2 df (Anxious insecurity vs placid self-confidence)
see 1.5.47-48

1.5.67-68 Factor Q^1, raw scores 2 df (Radicalism vs. Conservatism)
see 1.5.43-44

1.5.69-70 Factor Q^2, raw scores 2 df (Independent self-sufficiency vs lack of resolution)
see 1.5.43-44

1.5.71-72 Factor Q^3, raw scores 2 df (Will control and character stability)
see 1.5.43-44

1.5.73-74 Factor Q^4, raw scores 2 df (Nervous tension)
see 1.5.47-48

Card 1.6 MSU Work-Beliefs Check-List, 1957

Column No.		
1.6.1-2	Card identification 2 df 01- card 1.1 02- card 1.2 : 06- card 1.6 (This card is punched 06) : nn- card 1.nn	
1.6.3-5	Person identification 3 df	
1.6.6	Question 1.1 0- zero points 1- one point Y- no answer	
1.6.7	q1.2	see 1.6.6
1.6.8	q1.3	ditto
1.6.9	q1.4	ditto
1.6.10	q1.5	ditto
1.6.11	q1.6	ditto
1.6.12	q1.7	ditto
1.6.13	q1.8	ditto
1.6.14	q2.1	ditto
1.6.15	q2.2	ditto
1.6.16	q2.3	ditto
1.6.17	q2.4	ditto
1.6.18	q2.5	ditto
1.6.19	q2.6	ditto
1.6.20	q2.7	ditto
1.6.21	q2.8	ditto
1.6.22	q3.1	ditto
1.6.23	q3.2	ditto
1.6.24	q3.3	ditto
1.6.25	q3.4	ditto
1.6.26	q3.5	ditto
1.6.27	q3.6	see 1.6.6
1.6.28	q4.1	ditto
1.6.29	q4.2	ditto
1.6.30	q4.3	ditto
1.6.31	q4.4	ditto
1.6.32	q4.5	ditto
1.6.33	q4.6	ditto
1.6.34	q4.7	ditto
1.6.35	q5.1	ditto
1.6.36	q5.2	ditto
1.6.37	q5.3	ditto
1.6.38	q5.4	ditto
1.6.39	q5.5	ditto
1.6.40	q5.6	ditto
1.6.41	q5.7	ditto
1.6.42	q5.8	ditto
1.6.43	q6.1	ditto
1.6.44	q6.2	ditto
1.6.45	q6.3	ditto
1.6.46	q6.4	ditto
1.6.47	q6.5	ditto
1.6.48	q6.6	ditto
1.6.49	q6.7	ditto

1.6.50 Belief Value Area 1. raw score (Belief that work is of expressive value vs. instrumental value)
0- zero points (instrumental value)
1- one point
:
8- eight points (instrinsic value)
Y - one or more 1. questions unanswered

1.6.51 Belief Value Area 2. raw score (Positive vs. negative evaluation of structured time)
0- zero points (negative evaluation)
1- one point
:
8- eight points (positive evaluation)
Y- one or more 2. questions unanswered

1.6.52 Belief Value Area 3, raw score (Positive vs. negative evaluation of physical mobility)
0- zero points (negative evaluation)
1- one point
:
6- six points (positive evaluation)
Y- one or more 3. questions unanswered

1.6.53 Belief Value Area 4. (positive vs. negative evaluation of change)
0- zero points (negative evaluation)
1- one point
:
7- seven points (positive evaluation)
Y- one or more 4. questions unanswered

1.6.54 Belief Value Area 5. (Belief in internal vs. external determinants of events)
0- zero points (external determination)
1- one point
:
8- eight points (internal determination)
Y- one or more 5, questions unanswered

1.6.55 Belief Value Area 6. (Positive vs. negative evaluation of delayed gratification)
0- zero points (negative evaluation)
1- one point
:
7- seven points (positive determination)
Y- one or more 6. questions unanswered

Card 1.7 California Test of Personality, Secondary Form AA, 1953 revision. E. W. Tiegs, W. W. Clark, and L. P. Thorpe

Column No.

1.7.1-2 Card identification 2 df
01- card 1.1
02- card 1.2
:
07- card 1.7 (This card is punched 07)
:
nn- card 1.nn

1.7.3-5 Person identification 3 df

1.7.6 Question 1
0- wrong ("maladjusted" response)
1- right ("adjusted" response)
Y- no answer

1.7.7	q2	see 1.76	1.7.27	q22	ditto
1.7.8	q3	ditto	1.7.28	q23	ditto
1.7.9	q4	ditto	1.7.29	q24	ditto
1.7.10	q5	ditto	1.7.30	q25	ditto
1.7.11	q6	ditto	1.7.31	q26	ditto
1.7.12	q7	ditto	1.7.32	q27	ditto
1.7.13	q8	ditto	1.7.33	q28	ditto
1.7.14	q9	ditto	1.7.34	q29	ditto
1.7.15	q10	ditto	1.7.35	q30	ditto
1.7.16	q11	ditto	1.7.36	q31	ditto
1.7.17	q12	ditto	1.7.37	q32	ditto
1.7.18	q13	ditto	1.7.38	q33	ditto
1.7.19	q14	ditto	1.7.39	q34	ditto
1.7.20	q15	ditto	1.7.40	q35	ditto
1.7.21	q16	ditto	1.7.41	q36	ditto
1.7.22	q17	ditto	1.7.42	q37	ditto
1.7.23	q18	ditto	1.7.43	q38	ditto
1.7.24	q19	ditto	1.7.44	q39	ditto
1.7.25	q20	ditto	1.7.45	q40	ditto
1.7.26	q21	ditto	1.7.46	q41	ditto

1.7.47	q42	see 1.7.6	1.7.76	q71	see 1.7.6
1.7.48	q43	ditto	1.7.77	q72	ditto
1.7.49	q44	ditto	1.7.78	q73	ditto
1.7.50	q45	ditto	1.7.79	q74	ditto
1.7.51	q46	ditto	1.7.80	q75	ditto
1.7.52	q47	ditto			
1.7.53	q48	ditto			
1.7.54	q49	ditto			
1.7.55	q50	ditto			
1.7.56	q51	ditto			
1.7.57	q52	ditto			
1.7.58	q53	ditto			
1.7.59	q54	ditto			
1.7.60	q55	ditto			
1.7.61	q56	ditto			
1.7.62	q57	ditto			
1.7.63	q58	ditto			
1.7.64	q59	ditto			
1.7.65	q60	ditto			
1.7.66	q61	ditto			
1.7.67	q62	ditto			
1.7.68	q63	ditto			
1.7.69	q64	ditto			
1.7.70	q65	ditto			
1.7.71	q66	ditto			
1.7.72	q67	ditto			
1.7.73	q68	ditto			
1.7.74	q69	ditto			
1.7.75	q70	ditto			

Card 1.8 California Test of Personality, Secondary Form AA (continued)

Column No.					
1.8.1-2	Card identification 2 df 01- card 1.1 02- card 1.2 : 08- card 1.8 (This card is punched 08) : nn- card 1.nn				
1.8.3-5	Person identification 3 df				
1.8.6	q76	see 1.7.6	1.8.30	q100	see 1.7.6
1.8.7	q77	ditto	1.8.31	q101	ditto
1.8.8	q78	ditto	1.8.32	q102	ditto
1.8.9	q79	ditto	1.8.33	q103	ditto
1.8.10	q80	ditto	1.8.34	q104	ditto
1.8.11	q81	ditto	1.8.35	q105	ditto
1.8.12	q82	ditto	1.8.36	q106	ditto
1.8.13	q83	ditto	1.8.37	q107	ditto
1.8.14	q84	ditto	1.8.38	q108	ditto
1.8.15	q85	ditto	1.8.39	q109	ditto
1.8.16	q86	ditto	1.8.40	q110	ditto
1.8.17	q87	ditto	1.8.41	q111	ditto
1.8.18	q88	ditto	1.8.42	q112	ditto
1.8.19	q89	ditto	1.8.43	q113	ditto
1.8.20	q90	ditto	1.8.44	q114	ditto
1.8.21	q91	ditto	1.8.45	q115	ditto
1.8.22	q92	ditto	1.8.46	q116	ditto
1.8.23	q93	ditto	1.8.47	q117	ditto
1.8.24	q94	ditto	1.8.48	q118	ditto
1.8.25	q95	ditto	1.8.49	q119	ditto
1.8.26	q96	ditto	1.8.50	q120	ditto
1.8.27	q97	ditto	1.8.51	q121	ditto
1.8.28	q98	ditto	1.8.52	q122	ditto
1.8.29	q99	ditto			

1.8.53	q123	see 1.7.6
1.8.54	q124	ditto
1.8.55	q125	ditto
1.8.56	q126	ditto
1.8.57	q127	ditto
1.8.58	q128	ditto
1.8.59	q129	ditto
1.8.60	q130	ditto
1.8.61	q131	ditto
1.8.62	q132	ditto
1.8.63	q133	ditto
1.8.64	q134	ditto
1.8.65	q135	ditto
1.8.66	q136	ditto
1.8.67	q137	ditto
1.8.68	q138	ditto
1.8.69	q139	ditto
1.8.70	q140	ditto
1.8.71	q141	ditto
1.8.72	q142	ditto
1.8.73	q143	ditto
1.8.74	q144	ditto
1.8.75	q145	ditto
1.8.76	q146	ditto
1.8.77	q147	ditto
1.8.78	q148	ditto
1.8.79	q149	ditto
1.8.80	q150	ditto

Card 1.9 California Test of Personality, Secondary Form AA (continued)

Column No.

1.9.1-2 Card identification 2 df
01- card 1.1
02- card 1.2
:
09- card 1.9 (This card is punched 09)
:
nn- card 1.nn

1.9.3-5 Person identification 3 df

1.9.6	q151	see 1.7.6	1.9.28	q173	see 1.7.6
1.9.7	q152	ditto	1.9.29	q174	ditto
1.9.8	q153	ditto	1.9.30	q175	ditto
1.9.9	q154	ditto	1.9.31	q176	ditto
1.9.10	q155	ditto	1.9.32	q177	ditto
1.9.11	q156	ditto	1.9.33	q178	ditto
1.9.12	q157	ditto	1.9.34	q179	ditto
1.9.13	q158	ditto	1.9.35	q180	ditto
1.9.14	q159	ditto			
1.9.15	q160	ditto			
1.9.16	q161	ditto			
1.9.17	q162	ditto			
1.9.18	q163	ditto			
1.9.19	q164	ditto			
1.9.20	q165	ditto			
1.9.21	q166	ditto			
1.9.22	q167	ditto			
1.9.23	q168	ditto			
1.9.24	q169	ditto			
1.9.25	q170	ditto			
1.9.26	q171	ditto			
1.9.27	q172	ditto			

1.9.36-37 Subtest 1A (Self-reliance) raw score 2 df
00- zero points
01- one point
:
15- fifteen points
YY- one or more questions unanswered

1.9.38-39 Subtest 1B (Sense of personal worth) raw score 2 df
see 1.9.36-37

1.9.40-41 Subtest 1C (Sense of personal freedom) raw score 2 df
see 1.9.36-37

1.9.42-43 Subtest 1D (Feeling of belonging) raw score 2 df
see 1.9.36-37

1.9.44-45 Subtest 1E (Withdrawing tendencies) raw score 2 df
see 1.9.36-37

1.9.46-47 Subtest 1F (Nervous symptoms) raw score 2 df
see 1.9.36-37

1.9.48-49 Subtest 2A (Social standards) raw score 2 df
see 1.9.36-37

1.9.50-51 Subtest 2B (Social skills) raw score 2 df
see 1.9.36-37

1.9.52-53 Subtest 2C (Anti-social tendencies) raw score 2 df
see 1.9.36-37

1.9.54-55 Subtest 2D (Family relations) raw score 2 df
see 1.9.36-37

1.9.56-57 Subtest 2E (School relations) raw score 2 df
see 1.9.36-37

1.9.58-59 Subtest 2F (Community relations) raw scores 2 df
see 1.9.36-37

1.9.60-61 Personal adjustment raw scores - sum of Subtests 1A-1F 2 df
00- zero points
01- one point
:
90- ninety points
YY- one or more questions unanswered

1.9.62-63 Social adjustment raw scores - sum of subtests 2A-2F 2 df
see 1.9.60-61

1.9.64-65 Total adjustment raw scores - sum of all subtest scores 3 df
000- zero points
001- one point
:
180- one hundred eighty points
YYY- one or more questions unanswered

Card 1.10 I.Q. Scores- Content Responses to IPAT Test of G, Culture Free, Scale 3A, R.B. Cattell and A.K.S. Cattell (continued from Card 1.1)

Column No.

1.10.1-2 Card Identification 2 df
01- card 1.1
02- card 1.2
:
10- card 1.10 (This card is punched 10)
:
nn- card 1.nn

1.10.3-5 Person identification 3 df

1.10.6 Test 1 question 1 (T1, q1)
1- response a
2- response b
3- response c
4- response d
5- response e
6- response f
Y- no response

1.10.7 T1, q^2 see 1.10.6
1.10.8 T1, q^3 ditto
1.10.9 T1, q^4 ditto
1.10.10 T1, q^5 ditto
1.10.11 T1, q^6 ditto
1.10.12 T1, q^7 ditto
1.10.13 T1, q^8 ditto
1.10.14 T1, q^9 ditto
1.10.15 T1, q^{10} ditto
1.10.16 T1, q^{11} ditto
1.10.17 T1, q^{12} ditto
1.10.18 T1, q^{13} ditto

1.10.19 T2, q1 (double response)
0- a and b
1- a and c
2- a and d
3- a and e
4- b and c
5- b and d
6- b and e
7- c and d
8- c and e
9- d and e
Y- single or no response

1.10.20 T2, q^2 see 1.10.19
1.10.21 T2, q^3 ditto
1.10.22 T2, q^4 ditto
1.10.23 T2, q^5 ditto
1.10.24 T2, q^6 see 1.10.19
1.10.25 T2, q^7 ditto
1.10.26 T2, q^8 ditto
1.10.27 T2, q^9 ditto
1.10.28 T2, q^{10} ditto
1.10.29 T2, q^{11} ditto
1.10.30 T2, q^{12} ditto
1.10.31 T2, q^{13} ditto
1.10.32 T2, q^{14} ditto

1.10.33 T3, q^1 see 1.10.6
1.10.34 T3, q^2 ditto
1.10.35 T3, q^3 ditto
1.10.36 T3, q^4 ditto
1.10.37 T3, q^5 ditto
1.10.38 T3, q^6 ditto
1.10.39 T3, q^7 ditto
1.10.40 T3, q^8 ditto
1.10.41 T3, q^9 ditto
1.10.42 T3, q^{10} ditto
1.10.43 T3, q^{11} ditto
1.10.44 T3, q^{12} ditto

1.10.45 T3, q^{13} see 1.10.6

1.10.46 T4, q^{1}
1- response a
2- response b
3- response c
4- response d
5- response e
Y- no response

1.10.47 T4, q^{2} see 1.10.46

1.10.48 T4, q^{3} ditto

1.10.49 T4, q^{4} ditto

1.10.50 T4, q^{5} ditto

1.10.51 T4, q^{6} ditto

1.10.52 T4, q^{7} ditto

1.10.53 T4, q^{8} ditto

1.10.54 T4, q^{9} ditto

1.10.55 T4, q^{10} ditto

1.10.56-57 Test 1: Total number of questions attempted (i.e., total number of questions to which ego responded, whether his response was correct or incorrect.) 2 df
01- one attempted
02- two attempted
:
13- thirteen attempted
YY- Test 1 not taken (i.e., none attempted)

1.10.58-59 Test 2: Total number of questions attempted (i.e., total number of questions to which ego responded, whether his response was correct or incorrect) 2 df
01- one attempted
02- two attempted
:
14- fourteen attempted
YY- Test 2 not taken (i.e., none attempted)

1.10.60-61 Test 3: Total number of questions attempted (i.e., total number of questions to which ego responded, whether his response was correct or incorrect.) 2 df
01- one attempted
02- two attempted
:
13- thirteen attempted
YY- Test 3 not taken (i.e., none attempted)

1.10.62-63 Test 4: Total number of questions attempted (i.e., total number of questions to which ego responded, whether his response was correct or incorrect.) 2 df
01- one attempted
02- two attempted
:
10- ten attempted
YY- Test 4 not taken (i.e., none attempted)

1.10.64-65 Test 1 through 4: Total number of questions attempted (i.e., total number of questions to which ego responded, whether his response was correct or incorrect.) 2 df
04- four attempted
05- five attempted
:
50- fifty attempted
YY- no answer in either Test 1, Test 2, Test 3, or Test 4

1.10.66-68 Test 1 Ratio: number right divided by number attempted 3 df
000-0.00
000-0.01
:
100-1.00
YYY- Test 1 not taken (i.e., none attempted)

1.10.69-71 Test 2 Ratio: number right divided by number attempted 3 df
000-0.00
000-0.01
:
100-1.00
YYY-Test 2 not taken (i.e., none attempted)

1.10.72-74 Test 3 Ratio: number right divided by number attempted 3 df
000-0.00
001-0.01
:
100-1.00
YYY- Test 3 not taken (i.e., none attempted)

1.10.75-77 Test 4 Ratio: number right divided by number attempted 3 df
000-0.00
001-0.01
:
100-1.00
YYY- Test 4 not taken (i.e., none attempted)

1.10.78-80 Test 1 through 4 Ratio: number right divided by number attempted 3 df
000-0.00
001-0.01
:
100-1.00
YYY- no answer in either Test 1, Test 2, Test 3, or Test 4

Card 1.11 . Questionnaire- Occupational Plans of Michigan Youth

Column No.

1.11.1-2 Card identification 2 df
01- card 1.1
02- card 1.2
:
11- card 1.11
:
nn- card 1.nn

1.11.3-5 Person identification 3 df

1.11.6-7 Age in months to nearest month (OPMY Q13)
00- sixteen years, 11-12 months
01 seventeen years, 0 months
02- " " , 1 "
03 " " , 2 "
04 " " , 3 "
05 " " , 4 "
06 " " , 5 "
07 " " , 6 "
08 " " , 7 "
09 " " , 8 "
10 " " , 9 "
11 " " , 10 "
12 " " , 11 "
YY- no answer

1.11.8 Class in school (OPMY Q15)
0- seventh grade
1- eighth grade
2 ninth " (High school freshman)
3- tenth " (" " sophomore)
4- eleventh" (" " junior)
5- twelfth " (" " senior)

1.11.9 "I make my regular home with:" (OPMY Q16)
0- my own parents
1- a parent and a step-parent
2- one parent only
3- my grandparents
4- an uncle or aunt
5- other
Y- no answer

1.11.10 Church membership (OPMY Q17)
0- no
1- yes
Y- no answer

1.11.11 Church preference (OPMY Q17)
1- Roman Catholic
2- Anglo-Protestant High Prestige Churches
Episcopalean
Presbyterian
Congregationalist

3- Anglo-Protestant Low Prestige Churches
Methodist
Baptist
Others
4- Protestant Sects
5- Continental Protestant
Lutheran
Evangelical
Reformed
6- Jewish
Y- No answer or no preference

1.11.12 Migration status (OPMY QI5 compared to OPMY QI9)
0- migrant
seniors attending same high school 1,2, or 3 years
juniors attending same high school 1, or 2 years
sophomores attending same high school 1 year
1- non-migrant
seniors attending same school four or more years
juniors attending same school three or more years
sophomores attending same school two or more years
Y- no answer to Q5 or Q9, or insufficient information.

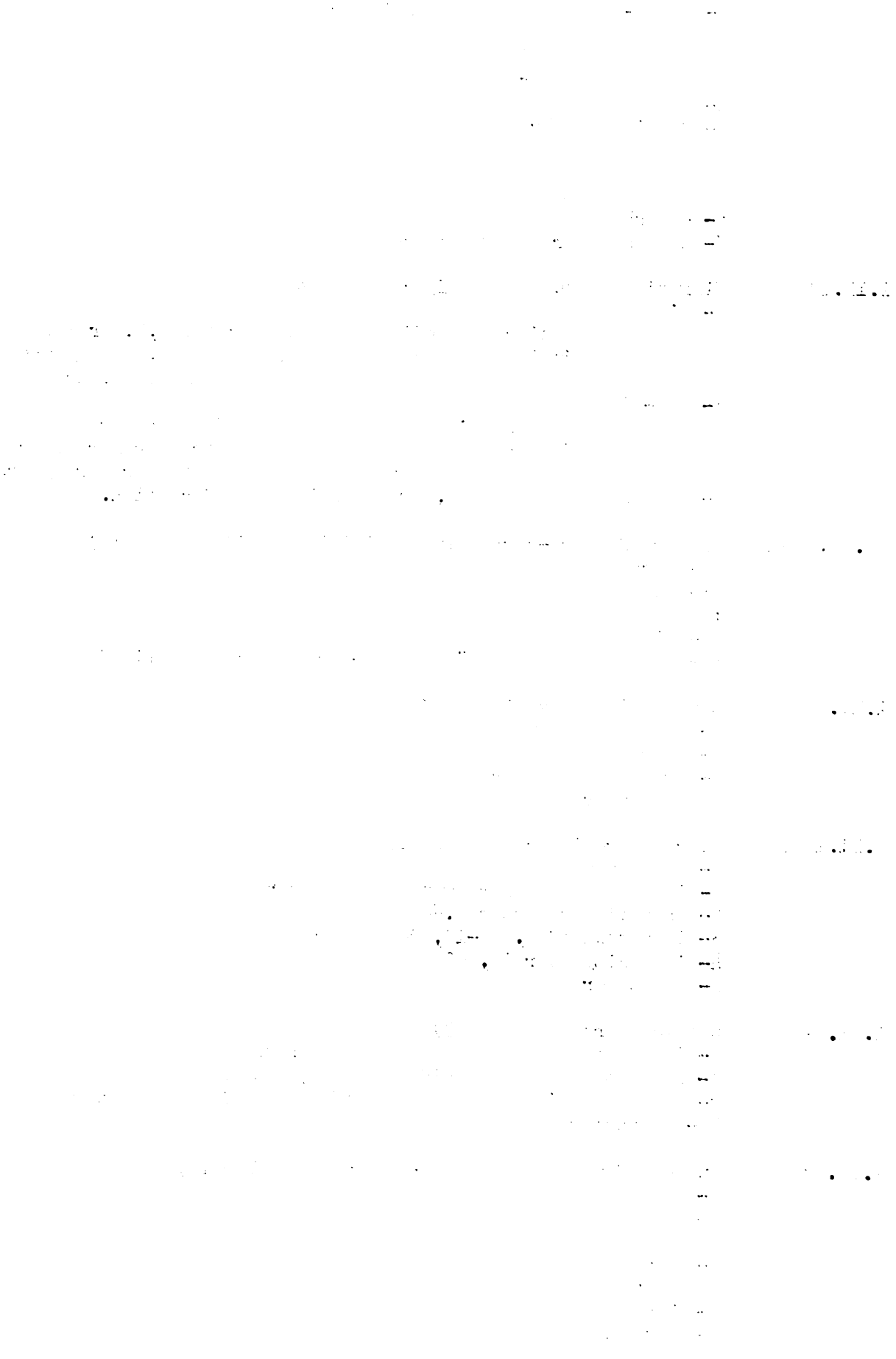
11.11.13-14 Number of extra-curricular activities 2 df (OPMY QI10)
00- zero
01- one
:
99- ninety nine
YY- no answer but not "no extra-curricular activities"

1.11.15 Leadership activities self-estimated (OPMY QI11)
0- less than average
1- average
2- greater than average
Y- no answer

1.11.16 Place of residence (OPMY QI12)
0- on a farm
1- in the open country but not on a farm
2- in a village under 2,500
3- in a town of 2,500-10,000
4- in a city over 10,000
Y- no answer

1.11.17 Outside work (OPMY QI13)
0- I do not work outside my family and home
1- I sometimes work outside my family and home
2- I have a fairly regular job outside my family and home
Y - no answer

1.11.18 Number of adult male model-figures (OPMY QI14)
0- zero
1- one
2- two
3- three
4- four
5- five
Y- no answer



1.11.19-20 Mean occupational prestige rating (North-Hatt) of adult male and model-figures personally known to ego (OPMY QI14) 2 df
34- thirty four points
35- thrity five points
:
96- ninety six points
YY- no adult

1.11.21-22 Proportion of Gemeinschaft-Gesellschaft reference groups - adult male model figure (OPMY QI14) 2 df (total gesellschaft figures divided by total figures)
00- 0.0: zero gesellschaft, all gemeinschaft responses
10- 1.0: all gesellschaft responses, zero gemeinschaft
YY- no relationship data.

1.11.23-24 Mean OAS score of best friends (OPMY QI15 friends OAS toatal scores) 2 df
00- zero points
01- one point
:
80- eighty points
YY- no best friends listed

1.11.25-26 Mean number of years of college planned by best friends (OPMY QI15, best friends QII13) 2 df
00- 0.0 years
01- 0.1 "
:
99- 9.9 "
YY- no answer

1.11.27 Number of best friends (OPMY QI15)
0- zero
1- one
:
5- five or more
Y- no answer, but not zero

1.11.28 Number of different occupational choices (OPMY QII1,2,11,12)

1.11.29-30 North-Hatt occupational choice prestige score;
Highest choice (OPMY QII 1,2,11,12) 2 df
34- thirty four
:
96- ninety six
YY- not answer

1.11.31-32 North-Hatt occupational choice prestige score: Lowest choice (OPMY QII 1,2,11,12) 2 df
see 1.11.29-30

1.11.33-34 North-Hatt occupational choice prestige score: Final choice (OPMY QII 2, or OPMY QII 1) 2 df
If undecided between two or more choices in QII1, average the scores of the two being considered
see 1.11.29-30

1.11.35-36 North-Hatt occupational choice prestige score: Free choice (OPMY QII11) 2 df
see 1.11.29-30

1.11.37-38 North-Hatt occupational choice prestige score: Mature choice (OPMY Q II 12) 2 df
see 1.11.29-30

1.11.39-41 Mean occupational choice prestige level: average occupational prestige scores for all different occupational choices among OPMY Q II 1,2,11,12
340- thirty four point zero points
341- thirty four point one points
:
960- ninety six point zero points
YYY- no answer on 1.11.29-38

1.11.42 Type of final occupational choice (OPMY Q II2)
0- nonfarm
1- farm
Y- no answer

1.11.43 Degree of crystallization of final occupational choice (OPMY Q II 1, 2, 3)
0- completely uncrystallized: no final choice in (Q II 2) and no alternatives implied for (Q II 2)
1- almost uncrystallized: one or more choices in or implied by (Q II 2), and "I'm not sure my mind is made up" in (Q II3)
2- almost crystallized: "I'm not too sure, but I think my mind is made up" in (Q II3)
3- completely crystallized: "I feel sure my mind is made up" in (QII 3)
Y- no answer to (OPMY Q II 3) but clearly not identifiable as "completely uncrystallized" (Q II, 2)

1.11.44 Amount of thought regarding occupational choice (OPMY Q II 4)
0- "little thought"
1- "some thought"
2- "great deal of thought"
Y - no answer or not applicable

1.11.45 Amount of knowledge regarding occupational choice (OPMY Q II 5)
0- low: Does not know much about it, but will find out in school or job
1- medium: general knowledge, lacks details
2- high: H as good knowledge
Y- no answer or no occupational choice

1.11.46 Self estimate of ability for chosen occupation (OPMY Q II 6)
0- very much below average
1- somewhat below average
2- average
3- somewhat above average
4- very much above average
Y -no answer or not applicable

1.11.47 Self estimate of upward mobility potential (OPMY Q II 7)
0- very much below average
1- somewhat below average
2- average
3- somewhat above average
4- very much above average
Y- no answer or not applicable

1.11.48 Index of self-confidence in occupational competition (OPMY Q II 6, 7) sum of scores for 1.11.46 and 1.11.47
0- zero points; low self-confidence
1- one point
:
8- eight points: high self-confidence.
Y- no answer or not applicable on either or both 1.11.46 and 1.11.47

1.11.49 Amount of primary group support for choice of farming. Coded only for farm resident boys choosing farming. (OPMY Q I 12, II 2, 8, 9)
Scoring procedure
Q II 8. IN THE OCCUPATION I HAVE CHOSEN I CAN EXPECT HELP IN GETTING STARTED:
A. (2) from my father or mother who is in this type of work.
B. (1) from relatives who are in this type of work.
C. (1) from friends who are in this type of work.
D. (0) from no one.

(Y) I don't know because I have not made my choice yet.
(Y) no answer

Q II 9. AS TO FOLLOWING HIS OCCUPATION, (FOR BOYS ONLY) MY FATHER HAS:
E. (2) tried to encourage me.
F. (1) neither tried to encourage or discourage me.
G. (0) tried to discourage me.
(Y) no answer

Code:
0- zero points: (D + G)
1- one point: (B + G), (C + G), (D + F)
2- two points: (A + G), (B + C), (B + F), (C + F), (B + C + G) (D + E)
3- three points: (A + B) (A + C), (A + F), (A + B + G) (A + C + G), (B + E), (C + E), (B + C + F)
4- four points: (A + B + C), (A + E), (A + B + F), (A + C + F) (A + B + C + G), (B + C + E)
5- five points: (A + B + E), (A + C + E), (A + B + C + F)
6- six points: (A + B + C + E)
Y- not a farm boy or not a farm chooser; no answer or not applicable in either or both Q II 8 or Q II 9.

1.11.50 Goal value transitivity (OPMY Q II 10)
0- not transitive
1- transitive
Y- at least one question in Q II 10 unanswered

1.11.51 Importance of "money you can make" (OPMY Q II 10)
0- zero points
1- one point
:
4- four points
Y- at least one relevant subquestion unanswered

1.11.52 Importance of "difficulty in getting the required education" (OPMY Q II 10)
see 1.11.51

1.11.53 Importance of "working hours" (OPMY Q II 10)
see 1.11.51

1.11.54 Importance of "social standing" (OPMY Q II 10)
see 1.11.51

1.11.55 Importance of "good you can do" (OPMY Q II 10)
see 1.11.51

1.11.56 Level of college aspiration in years (OPMY Q II 13)
0- zero
1- two years or less
2- three or four years
3- five or six years
4- seven or more years
Y- no answer or insufficient evidence

1.11.57 Completeness of nuclear family (OPMY Q III 1)
0- incomplete (due to death, divorce or separation)
1- complete (both living together)
Y- no answer

1.11.58 Father's occupation (OPMY Q III 3)
0- not a farm operator
1- part-time farm operator
2- full time farm operator
Y -no answer or not applicable

1.11.59-60 North-Hatt Occupational prestige status scores of father's lowest prestige occupation (OPMY Q III 3) 2 df
see 1.11.29-30

1.11.61 Father's farm tenancy status: farm owners and part or full-time farm workers only (OPMY Q III 3)
0- laborer
1- renter
2- owner
Y- no answer or not applicable

1.11.62-64 Number of acres operated by father, farm operators only (OPMY Q III 3) 3 df
000- zero acres
001- one acre
:
999- nine hundred ninety nine
YYY- no answer or not applicable

1.11.65 Parental satisfaction with father's occupation (OPMY III Q 4,5) (An index of parental status anxiety)
Scoring procedure:
Q III 4. MY FATHER CONSIDERS HIS OCCUPATION TO BE:
(4) completely satisfactory
(3) fairly satisfactory
(2) good enough
(1) not very good
(0) very poor.

Q III 5. MY MOTHER CONSIDERS MY FATHER'S OCCUPATION TO BE:
(4) completely satisfactory
(3) fairly satisfactory
(2) good enough
(1) not very good
(0) very poor.

Coding: Sum of points for Q III 4 and Q III 5.
0- zero points
1- one point
:
8- eight points
Y- no answer for one or more questions

1.11.66 Number of first and second generation progenitors born outside the United States (OPMY Q III 6-11) An index of non-American culture status of family. Coding count each "don't know" or blank as if born in the United States, unless, the Q III 6-11 was ignored.
0- none
1- one
:
6- six
Y- no answer to any one of Q III 6-11.

1.11.67 Mexican versus non-Mexican cultural origins (OPMY Q III 6-11, Q I 1, Q V 8)
0- non-Mexican
1- Mexican
Y- insufficient evidence

1.11.68-69 Parental educational status (OPMY Q III 12-13) 2 df
Scoring procedure:
12. MY FATHER'S EDUCATION CONSISTED OF:
(0) less than 8 grades
(4) 8 grades
(6) 9-11 grades
(8) 12 grades
(10) some college
(12) college degree

13. MY MOTHER'S EDUCATION CONSISTED OF:
(0) less than 8 grades
(4) 8 grades
(6) 9-11 grades
(8) 12 grades
(10) some college
(12) college degree

1.11.68-69 (continued)

Coding: Sum of points for Q III 12 and Q III 13.
00- zero points
04- four points

24- twenty four points
YY- no answer to either or both Q III 12 or Q III 13.

1.11.70 Father's educational status (OPMY Q III 12)
0- less than 8 grades
1- 8 grades
2- 9-11 grades
3- 12 grades
4- some college
5- college degree
Y- no answer

1.11.71 Mother's educational status (OPMY Q III 13)
see 1.11.70

1.11.72 Parental educational discrepancy (OPMY Q III 12-13)
Scoring procedure:
(1) define "low education" for either parent as 8 grades or less
(2) define "medium education" for either parent as 9 through 12 grades
(3) define "high education" for either parent as some college or college degree

Coding:
0- zero points: mother's education high, father's education low
1- one point: mother's education medium, father's education low, or mother's education high, father's education medium
2- two points: both parents low, both parents medium or both parents high.
3- three points: father's education medium mother's education low, or father's education high, mother's education medium
4- four points: father's education high, mother's education low
Y- no answer for either or both Q III 12 and Q III 13.

1.11.73 Paternal desire for ego's post high school educational mobility (OPMY Q IV 1)
0- zero points (low desire): "quit high school and go to work"
1- one point: "go to work after high school"
2- two points: "never said much about it"
3- three points: "some encouragement to continue"
4- four points: (high desire) "strongly encouraged me to continue"
Y- no answer

1.11.74 Maternal desire for ego's post high school educational mobility. (OPMY Q IV 2)
See 1.11.72

1.11.75 Parental psychic support for post high school educational mobility. (OPMY Q IV 1 Q IV 2) Sum of scores from 1.11.72 and 1.11.73.
0- zero points (low support)
1- one point
:
8- eight points (high support)
Y- no answer for either or both Q IV 1 or Q IV 2.

1.11.76 Parents financial ability to assist ego in achieving mobility after high school (OPMY Q IV 3)
0- " able to give no help"
1- "able to give some help"
2- "able to give considera ble help"
Y- no answer

1.11.77 Parents willingness to assist ego in achieving mobility after high school. (OPMY Q IV 4)
0- "willing to give no help"
1- "willing to give some help"
2- "willing to give a great deal of help"
Y- no answer

1.11.78 Parents' propensity to assist ego in achieving mobility after high school (OPMY Q IV 3 and Q IV 4). (Means or "ability" times motivation or "willingness") Scoring procedure: score 1.11.75 multiplied by score 1.11.76.
0- zero points
1- one point
2- two points
(3)- not possible
4- four points
Y- no answer to either or both 1.11.75 or 1.11.76

1.11.79-80 Mean North-Hatt occupational prestige of best friends' fa thers (ego's OPMY Q I 15, best friends' OPMY Q III 3 lowest occupation of father)
34- thirty four points
:
96- ninety six points
YY- no answer to ego's OPMY Q I 15 or best friends' OPMY Q III 3.

Card 1.12: Questionnaire--Occupational Plans of Michigan Youth (continued from card 1.11)

Column No.

1.12.1-2 Card identification 2 df
01- card 1.1
02- card 1.2
:
12- card 1.12 (This card is punched 12)

1.12.3-5 Person identification 3 df

1.12.6 Paternal desire for ego's high occupational achievement (OPMY Q IV 5)
0- zero points (low desire): "Does not care how good the job I go into is."
1- one point: "Feels that the job I take should be a s good as most jobs around here."
2 - two points: "Wants me to have a job that is a little better than most jobs around here."
3- three points: " Wants me to have a job that is quite a bit better than most jobs around here."
4- four points: "Wants me to have a very important job."
Y- no answer.

1.12 .7 Maternal desire for ego's high occupational achievement (OPMY Q IV 6)
See 1.12.6

1.12.8 Parental psychic support for ego's high occupational achievement (OPMY Q IV 5 and Q IV 6) Sum of scores from 1.12.6 and 1.12.7.
0- zero points (low support)
1- one point
:
8- eight points (high support)
Y- no answer for either or both Q IV 5 and Q IV 6).

1.12.9-10 Parental desire for ego's high social status. (OPMY Q IV 1, Q IV 2, Q IV 5, Q IV 6) Sum of 1.11.73 and 1.12.8. 2 df
00- z ero points (low desire)
01- one point
:
16- sixteen points (high desire)
YY- no answer to anyone or more of Q IV 1, Q IV 2, Q IV 5, or Q IV 6.

1.12.11 Status anxiety (SA): Ego's satisfaction with father's education. (OPMY Q III 14)
0- low SA- "good enough" or "satisfactory"
1- high SA- "not very good" or "very poor"
Y- no answer

1.12.12 Status anxiety (SA): Ego's estimate of family's relative income. (OPMY Q III 16)
0- low SA- "just average" or "high"
1- high SA- "less than average" or "low"
Y- no answer

1.12.13 Status anxiety (SA): Ego's estimate of community importance evaluation of parents (OPMY Q III 17)
0- low SA- "average" or "important"
1- high SA- "less than average" or "not at all important"
Y- no answer

1.12.14 Status anxiety (SA): " My family is too poor to buy me the kind of things I need." (OPMY Q IV 7)
0- low SA- No
1- high SA- Yes
Y- no answer

1.12.15 Status anxiety (SA): " The girls I would like to date prefer to go out with boys whose families are more important than mine." (OPMY Q IV 8)
0- low SA- No
1- high SA- Yes
Y- no answer

1.12.16 Status anxiety (SA): "I often wish my father (or mother or guardian) had a better job." (OPMY Q IV 9)
0- low SA- No
1- high SA- Yes
Y- no answer

1.12.17 Status anxiety (SA): "I often wish my father was a more important man in the community than he is." (OPMY Q IV 10)
0- low SA- No
1- high SA- Yes
Y- no answer

1.12.18 Status anxiety (SA): "Do people seem to think well of your family's social standing?" California Test of Personality, Seconda ry Form AA, 1953 revision, E. W. Tiegs, W. W. Clark, and L. P. Thorpe; Question 23. (CTP Q 23)
0- low SA- Yes
1- high SA- No
Y- no answer

1.12.19 Status anx iety (SA): "Do you feel that people recognize your social standing as they should" (CTP Q 28)
0- low SA- Yes
1- high SA - No
Y- no a nswer

1.12.20 Status anxiety (SA): "Do you feel that your relatives are as attractive and successful as those of your friends". (CTP Q 48)
0- low SA- Yes
1- high SA- No
Y- no answer

1.12.21 Status anxiety (SA): " Are things difficult for you because your folks are usually short of money? (CTP Q 140)
0- low SA- No
1- high SA- Yes
Y- no answer

1.12.22 Status anxiety (SA): "Do you avoid inviting others to your home because it is not as nice as t heirs? " (CTP Q 147)
0- low SA- No
1- high SA- Yes
Y- no answer

1.12.23 Status anxiety (SA): "For the most part, are your neighbors the kind of people you like?" (CTP Q 178)
0- low SA- Yes
1- high SA- No
Y- no answer

1.12.24-25 Index of Status anxiety (SA). Sum of all SA responses, 1.12.11 to 1.12.23 2 df
00- zero points - low SA
01- one point
:
13- thirteen--high SA
YY- no answer to any or all of 1.12.11 to 1.12.23

1.12.26-27 Number of siblings in ego's family, including ego (OPMY Q V 1, 2,3, 4)
01- ego only
02- two
:
nn- the largest family
YY- no information but ego is not an only child

1.12.28-29 Ego's ordinal position in the sib group (OPMY Q V 1, 2, 3, 4) 2 df
01- eldest (or only)
02- second eldest
:
nn- youngest in the largest family
YY- no information, but ego is not an only child.

1.12.30 Summary variable of ego's sib group structural position (OPMY Q V 1, 2, 3, 4)
0- ego is an only child
1- ego is a member of a small family: sib group size is three or less.
2- ego is the eldest child in a large family (sib group size is four or more)
3- ego is the second child in a large family (sib group size is four or more)
4- ego is the youngest child in a large family (sib group size is four or more)
5- ego is a middle child (i.e., neither eldest, second eldest, nor youngest) in a large family (sib group size is four or more).
Y- no information, but ego is not an only child.

1.12.30 Number of siblings graduating from high school (OPMY Q V 5)
0- none
1- one
:
9- nine or more
Y- no answer or no sibling

1.12.31 Number of siblings quitting high school before graduation (OPMY Q V 6)
0- zero
1- one
:
9- nine or more
Y- no answer or no siblings

1.12.32 Number of siblings attending college (OPMY Q V 7)
0- zero
1- one
:
9- nine or more
Y- no answer or no siblings

1.12.33 Parental concern (OPMY Q V 9)
COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY FATHER WAS:
(4) much more interested in what I did.
(3) a little more interested in what I did.
(2) just about equally interested in what each of us did.
(1) a little less interested in what I did.
(0) much less interested in what I did.
(Y) no answer (include only children)

1.12.34 Parental concern (OPMY Q V 10)
COMPARED TO MOST OF MY BROTHERS, I BELIEVE MY MOTHER WAS:
(4) much more interested in what I did.
(3) a little more interested in what I did.
(2) just about equally interested in what each of us did.
(1) a little less interested in what I did.
(0) much less interested in what I did.
(Y) no answer (include only children)

1.12.35 Parental concern (OPMY Q V 11)
COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY FATHER WAS:
(4) much kinder to me.
(3) a little kinder to me.
(2) about equally kind to each of us.
(1) a little less kind to me.
(0) much less kind to me.
(Y) no answer (include only children)

1.12.36 Parental concern (OPMY Q V 12)
COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY MOTHER WAS:
(4) much kinder to me.
(3) a little kinder to me.
(2) about equally kind to each of us.
(1) a little less kind to me.
(0) much less kind to me.
(Y) no answer (include only children)

1.12.37 Parental concern (OPMY Q V 13)
COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY FATHER WAS:
(4) much more attentive to me.
(3) a little more attentive to me.
(2) about equally attentive to each of us.
(1) a little less attentive to me.
(0) much less attentive to me.

1.12.38 Parental concern (OPMY Q V 14)
COMPARED TO MOST OF MY BROTHERS AND SISTERS, I BELIEVE MY MOTHER WAS:
(4) much more attentive to me.
(3) a little more attentive to me.
(2) about equally attentive to each of us.
(1) a little less attentive to me.
(0) much less attentive to me.
(Y) no answer (include only children)

1.12.39-40 Index of Parental Concern (PC) (OPMY Q V 9-14) 2 df
00- zero points (low PC)
01- one point
:
24-twenty four points (high PC)
YY- no answer to any or all of OPMY Q V 9-14 (include only children)

1.12.41 Inter-sib concern(SC) (OPMY Q V 15)
USUALLY I WAS:
(4) much more interested in most of my brothers and sisters than they were in me.
(3) a little more interested in most of my brothers and sisters than they were in me.
(2) about as interested in my brothers and sisters as they were in me.
(1) a little less interested in most of my brothers and sisters than they were in me.
(0) much less interested in most of my brothers and sisters than they were in me.
(Y) no answer (include only children)

1.12.42 Modified Sewell socio-economic status scale- short form (SES):
House ownership (OPMY Q VI 1)
3- rented
6- owned
Y- no answer (but not no)

1.12.43 Modified Sewell socio-economic status scale- short form (SES):
House construction (OPMY Q VI 4)
3- unpainted frame, artificial brick, trailer house
5- brick, stucco, painted frame, block (concrete on cinder), aluminum siding, shingle; combinations of these
Y- no answer (but not no)

1.12.44 Modified Sewell socio-economic status scale- short form (SES):
Room-person ratio (OPMY Q VI 2, Q VI 3)
3- below 1.00
5- 1.00 - 1.99
7- 2.00 and up
Y- no answer

1.12.45 Modified Sewell socio-economic status scale- short form (SES):
lighting facilities (OPMY Q VI 5)
3- oil lamps, types not mentioned under 6 or 8, none
6- gas, mantle or pressure.
8- electric
Y- no answer (but not no)

1.12.46 Modified Sewell socio-economic status scale- short form (SES): running water facilities (OPMY Q VI 8)
4- no
8- yes
Y- no answer (but not no)

1.12.47 Modified Sewell socio-economic status scale-short form (SES): power washing facility (OPMY Q VI 10)
3- no
6- yes
Y- no answer (but not no)

1.12.48 Modified Sewell socio-economic status scale- short form (SES): refrigeration facilities (OPMY Q VI 6, Q VI 7)
3- none, or types not specified under 6 or 8.
6- ice
8- mechanical, including deep freeze
Y- no answer (but not no)

1.12.49 Modified Sewell socio-economic status scale- short form (SES): communication facilities- radio (OPMY Q VI 11)
3- no
6- yes
Y- no answer (but not no)

1.12.50 Modified Sewell socio-economic status scale-short form (SES): communication facilities- telephone (OPMY Q VI 13)
3- no
6- yes
Y- no answer (but not no)

1.12.51 Modified Sewell socio-economic scale- short form (SES): communication facilities- automobile (OPMY Q VI 12)
2- no
5- yes
Y- no answer (but not no)

1.12.52 Modified Sewell socio-economic scale- short form (SES): communication facilities- daily newspaper (OPMY Q VI 9)
3- no
6- yes
Y- no answer (but not to)

1.12.53 Modified Sewell socio-economic scale- short form (SES): education- father (OPMY Q III 14)
2- 0-7 years of school completed
4- 8 " " " "
6- 9-11 " " " "
7- 12 " " " "
8- 13 " " " "
Y- no answer

1.12.54 Modified Sewell socio-economic status scale- short form (SES): education - mother (OPMY Q III 13)
2- 0-7 years of school completed
4- 8 " " " "
6- 9-11 " " " "
7- 12 " " " "
8- 13 " " " "
Y- no answer

1.12.55 Modified Sewell socio-economic status scale- short form (SES): church attendance- father (OPMY Q IV 14)
2- father does not attend church at least once a month.
5- father attends church at least once a month
Y- no answer (but not no)

1.12.56 Modified Sewell socio-economic status scale- short form (SES): church attendance- mother (OPMY Q IV 15)
2- mother does not attend church at least once a month
5- mother attends church at least once a month.
Y- no answer (but not no)

1.12.57-58 Modified Sewell socio-economic status scale- short form (SES): Total Score 2 df
00- zero points (low SES)
01- one point
:
99- ninety nine points (high SES)
YY- no answer to any of 1.12.42 through 1.12.56

1.12.59-60 Modified Sewell socio-economic status scale- short form (SES): Total score for home quality, home facilities and communication facilities. (OPMY Q VI 1 through 13) 2 df
00- zero points (low SES)
01- one point
:
99- ninety nine points (high SES)
YY- no answer to any of 1.12.42 - 1.12.52

1.12.61-62 Modified Sewell socio-economic status scale- short form (SES): Total score for home quality (Sum of scores for 1.12.42, 1.12.43, 1.12.44) 2 df
09- nine points
10- ten points
:
18- eighteen points
YY- no answer to OPMY Q VI 1, 2, 3, or 4.

1.12.63-64 Modified Sewell socio-economic status scale- short form (SES): Total score for home facilities (Sum of scores for 1.12.45, 1.12.46, 1.12.47, 1.12.48)
13- thirteen points
:
30- thirty points
YY- no answer to OPMY Q VI 5, 6 7, 8 or 10.

1.12.65-66 Modified Sewell socio-economic status scale - short form (SES):
Total score for communication facilities (Su. of scores for 1.12.49, 1.12.50, 1.12.51, 1.12.52)
11 - 11 points
:
23 - twenty-three points
YY - no answer to OPMY 0 VI 9, 11, 12, 13

1.12.67-68 Composite Index of Social Status (CISS). Based upon parental education, home equality, home facilities, communication facilities, and parental occupational prestige.

1.12.69-71 Grade point average for years 1956-1957 - 3df
Scoring procedure:
(1) Only grades for academic and vocational semester-courses* are counted, physical education, etc. is not counted.
(2) Four points are given for each A.
Three " " " " " B.
Two " " " " " C.
One " " " " " D.
Zero " " " " " E.
(3) The total number of points for 1956-1957 computed.
(4) G. P. A. equals total points (from 3) divided by total academic and vocational courses taken during 1956-1957.

000 - G. P. A. equals 0.00
001 - " " " equals 0.001
:
400 - G. P. A. equals 4.00
YYY - no data

1.12.72 Number of agricultural semester courses* taken in high school through Spring, 1957.
0 - none
1 - one
:
9 - nine
y - no data

1.12.73-75 Grade point average for all agricultural semester-courses* taken through 1956-57 - 3df.
Scoring procedure: Same as 1.12.69-71, except that only agricultural courses (see 1.12.72) are counted.
000 - Agricultural G. P. A. equals 0.00
001 - " " " 0.01
:
400 - " " " 4.00
xyy - insufficient data
yyy - no agricultural courses taken

1.12.76 Number of siblings graduating from high school (OPMY Q V 5)
0 - none
1 - one

---

*One semester course equals 1/2 a unit.

1.12.76 (cont.)

9 - nine or more
Y - no answer or no sibling

1.12.77-80 School record data

1.13.15 Item 2 (Plans not to be a farmer)
Question 1 (I2, Q1)

0 - Yes
1 - No
2 - Contingent (depends on .....)
Y - No answer

1.13.16 Item 2, Q2
0 - Yes
1 - No
2 - Contingent (depends on .....)
Y - No answer

1.13.17 Item 2, Q3 ditto 1.13.16

1.13.18 Item 2, Q4 ditto

1.13.19 Item 2, Q5 ditto

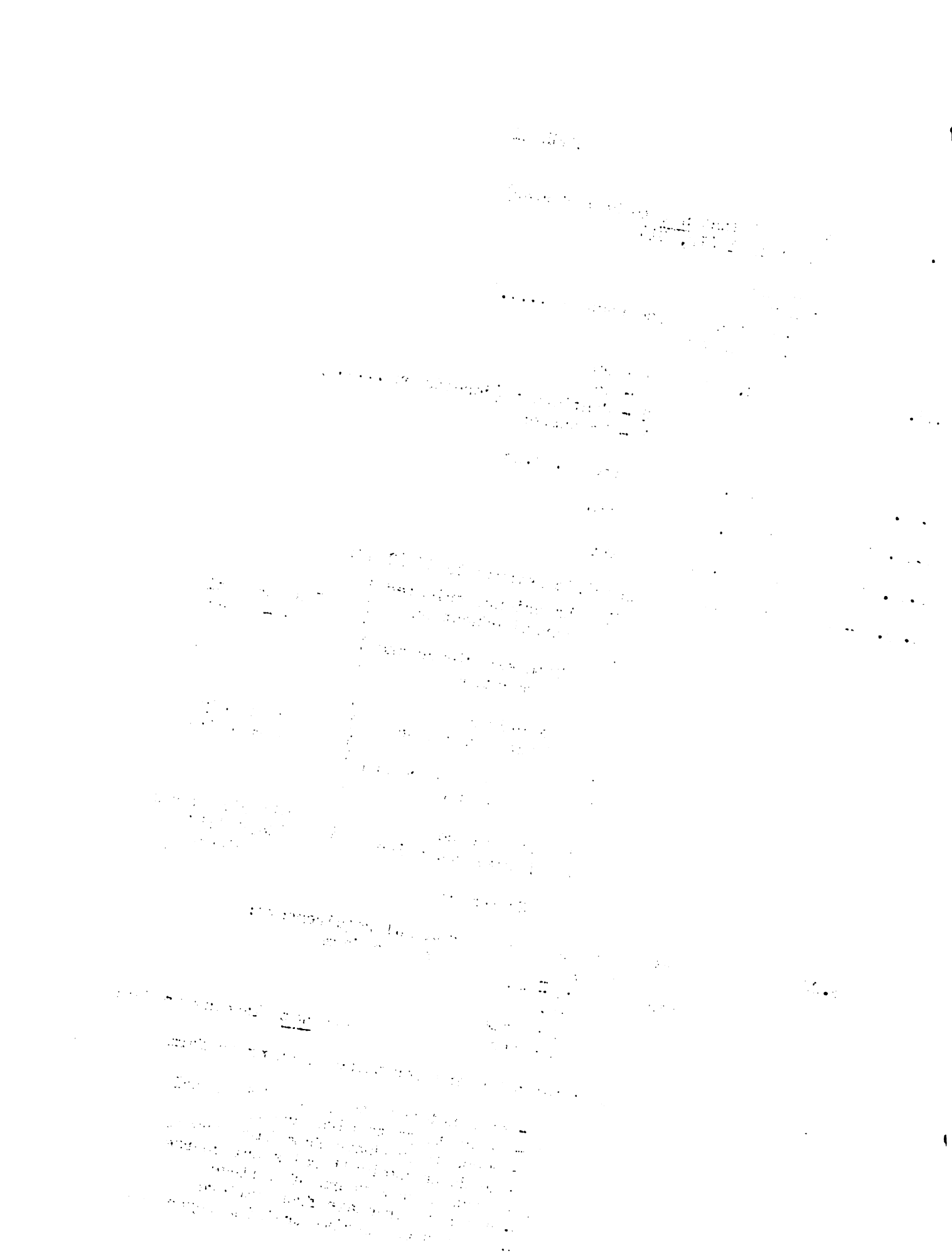
1.13.20-21 Categories of specific remarks to Q5 (2 df)

01	Experience oriented	Instrumental (Task-oriented)
02	Formal education	
—		
04	Both experience and education	
11	Experience	Very likely instrumental
12	Formal education	
—		
14	Both experience and education	
21	Experience	Clearly expressive (Self fulfillment oriented)
22	Formal education	
YY	No remark	

1.13.22 Comparison of ideas on educational requirements:
Planning to farm vs planning not to farm
Planning to farm ——
0 - More
1 - Same
2 - Less Than not planning to farm

1.13.23 Highest indicated schooling for those planning to farm

0 - does not need to go to high school
1 - needs to go to high school
2 - needs to graduate from high school
3 - needs an agricultural short course
4 - needs 1 or 2 years of college
5 - needs to graduate from college
6 - needs some special training beyond college



1.13.24 Highest indicated schooling for those not planning to farm:

0 - does not need to go to high school
1 - needs to go to high school
2 - needs to graduate from high school
3 - needs 1 or 2 years of college
4 - needs to graduate from college
5 - needs some special training beyond college

Card 1.14 Normalized Data in the form of T-Scores. (Includes estimates made for incomplete data)*

Column No.

1.14.1-2 Card identification (2 df)

01 - Card 1.1
02 - Card 1.2
:
14 - Card 1.14 (This card is punched 14)

1.14.3-5 Person identification (3 df)

1.14.6 Residence: father's occupation.

0 - not a farm operator
1 - part-time farm operator
2 - full-time farm operator
Y - no answer or not applicable

1.14.7 Occupational choices: Farm vs. nonfarm

0 - nonfarm
1 - farm
Y - no answer

1.14.8-9 Occupational aspiration T-Score. (2 df)
20- twenty points
21- twenty-one points
:
80- eighty points

1.14.10-11 College aspiration level T-Scores. (2 df)
Computed from 1.11.56
See 1.14.8-9

1.14.12-13 I. Q. T-Scores. (2 df)
Computed from 1.1.68-69
See 1.14.8-9

1.14.14-15 16 PF Test T-Scores: Factor "A". (2 df)
Computed from 1.5.43-44 See 1.14.8-9

1.14.16-17 16 PF, Factor "B" T-Scores. (2 df)
Computed from 1.5.45-46 See 1.14.8-9

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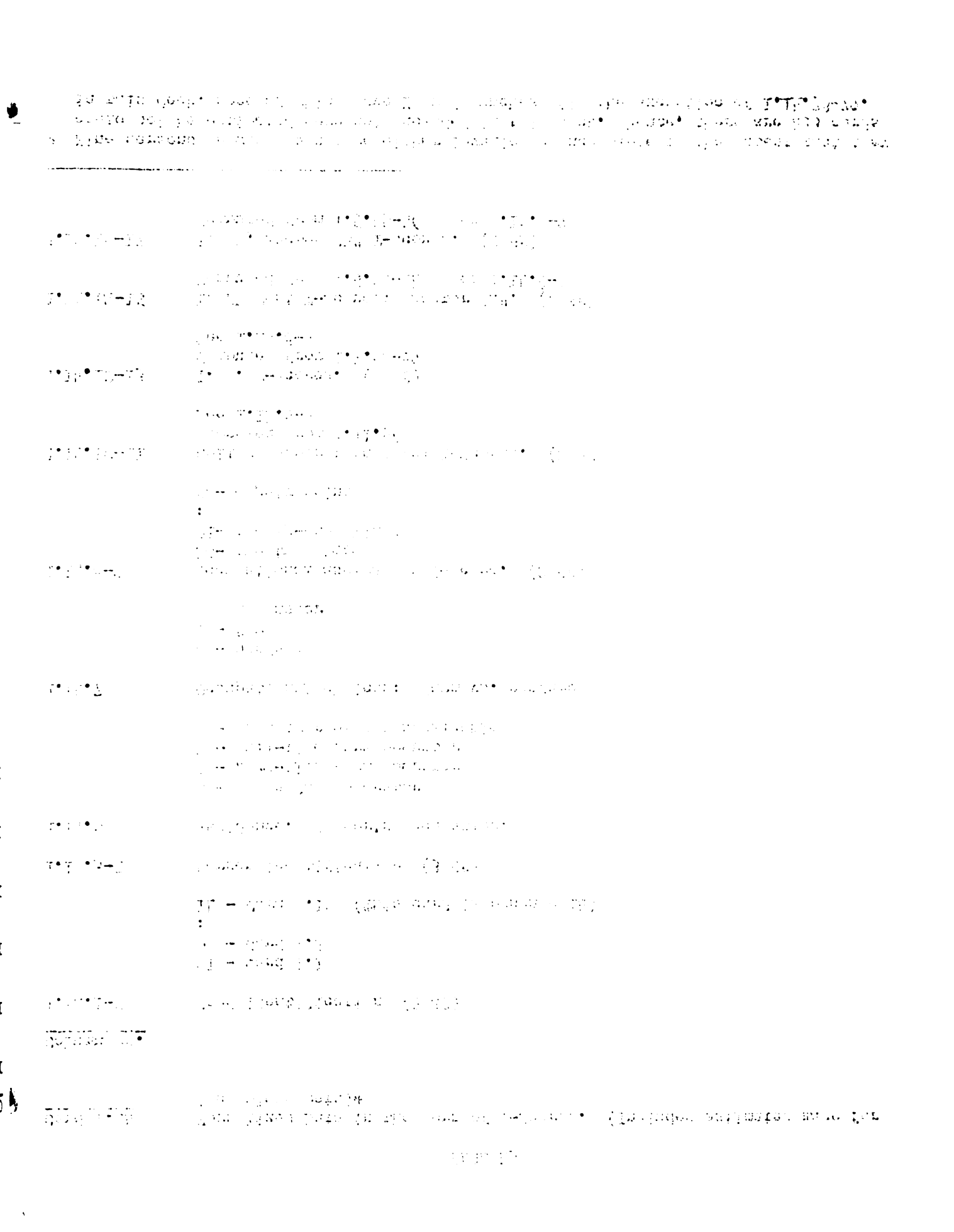
* Nine persons on whom data were either invalid or incomplete to the extent that they could not be estimated were not included in this deck. Hence, there are 433 cards in this deck, none of which have Y or X punches with the exception of 1.14.78-79.



Column No.

1.14.18-19 16 PF, Factor "C" T-Scores. (2 df)
Computed from 1.5.47-48 See 1.14.8-9

1.14.20-21 16 PF, Factor "E" T-Scores. (2 df)
Computed from 1.5.49-50 See 1.14.8-9

1.14.22-23 16 PF, Factor "F" T-Scores. (2 df)
Computed from 1.5.51-52 See 1.14.8-9

1.14.24-25 16 PF, Factor "G" T-Scores. (2 df)
Computed from 1.5.53-54 See 1.14.8-9

1.14.26-27 16 PF, Factor "H" T-Scores. (2 df)
Computed from 1.5.55-56 See 1.14.8-9

1.14.28-29 16 PF, Factor "I" T-Scores. (2 df)
Computed from 1.5.57-58 See 1.14.8-9

1.14.30-31 16 PF, Factor "L" T-Scores. (2 df)
Computed from 1.5.59-60 See 1.14.8-9

1.14.32-33 16 PF, Factor "M" T-Scores. (2 df)
Computed from 1.5.61-62 See 1.14.8-9

1.14.34-35 16 PF, Factor "N" T-Scores. (2 df)
Computed from 1.5.63-64 See 1.14.8-9

1.14.36-37 16 PF, Factor "O" T-Scores. (2 df)
Computed from 1.5.65-66 See 1.14.8-9

1.14.38-39 16 PF, Factor "Q_1" T-Scores. (2 df)
Computed from 1.5.67-68 See 1.14.8-9

1.14.40-41 16 PF, Factor "Q_2" T-Scores. (2 df)
Computed from 1.5.69-70 See 1.14.8-9

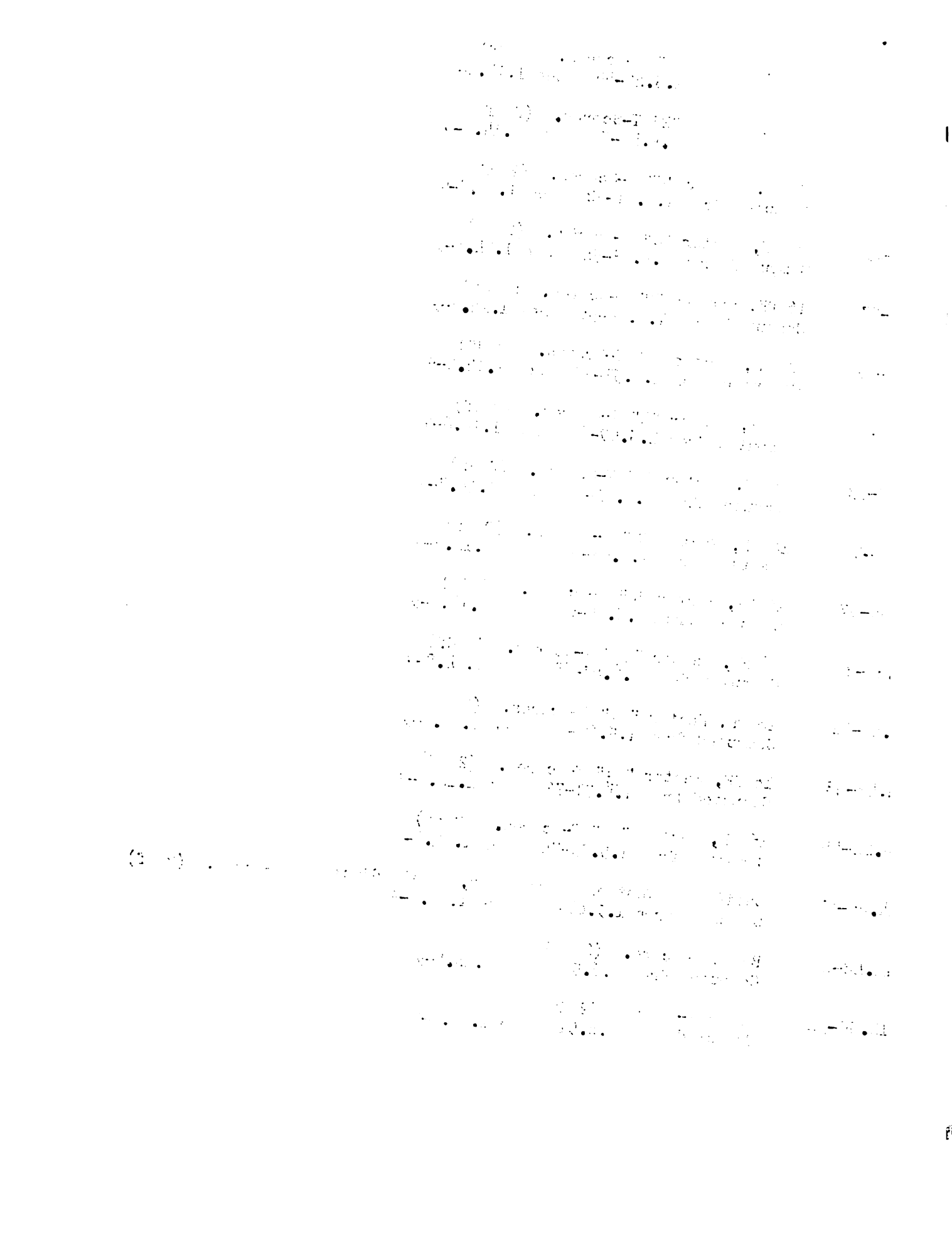
1.14.42-43 16 PF, Factor "Q_3" T-Scores. (2 df)
Computed from 1.5.71-72 See 1.14.8-9

1.14.44-45 16 PF, Factor "Q_4" T-Scores. (2 df)
Computed from 1.5.73-74 See 1.14.8-9

1.14.46-47 California Test of Personality, Total Adjustment T-Score. (2 df)
Computed from 1.9.64-66 See 1.14.8-9

1.14.48-49 BVA 1 T-Score. (2 df)
Computed from 1.6.50 See 1.14.8-9

1.14.50-51 BVA 2 T-Score. (2 df)
Computed from 1.6.51 See 1.14.8-9



Column No.

1.14.52-53 BVA 3 T-Score. (2 df)
Computed from 1.6.52 See 1.14.8-9

1.14.54-55 BVA 4 T-Score. (2 df)
Computed from 1.6.53 See 1.14.8-9

1.14.56-57 BVA 5 T-Score. (2 df)
Computed from 1.6.54 See 1.14.8-9

1.14.58-59 BVA 6 T-Score. (2 df)
Computed from 1.6.55 See 1.14.8-9

1.14.60-61 Occupational crystallization T-Scores. (2 df)
Computed from 1.11.43 See 1.14.8-9

1.14.62-63 Father's educational status T-Scores. (2 df)
Computed from 1.11.70 See 1.14.8-9

1.14.64-65 T-Scores: Parental desire for ego's post-high school education. (2 df)
Computed from 1.11.75 See 1.14.8-9

1.14.66-67 T-Scores: Parental desire for ego's high occupational achievement. (2 df)
Computed from 1.12.8 See 1.14.8-9

1.14.68-69 T-Scores: Parental desire for ego's high social status. (2 df)
Computed from 1.12.9-10 See 1.14.8-9

1.14.70-71 Status Anxiety T-Scores. (2 df)
Computed from 1.12.24-25 See 1.14.8-9

1.14.72-73 Sewell SES T-Scores. (2 df)
Computed from 1.12.57-58 See 1.14.8-9

1.14.74-75 GPA 1956-1957: T-Scores. (2 df)
Computed from 1.12.69-71 See 1.14.8-9

1.14.76-77 Number of agricultural semester courses through 1957: T-Scores. (2 df)
Computed from 1.12.72
46- no agricultural courses taken
56- one agricultural course taken
:
76- nine agricultural courses taken

1.14.78-79 Agricultural GPA through 1957: T-Scores. (2 df)
Computed from 1.12.73-75
20- twenty points
21- twenty-one points
:
80- eighty points
YY- no agricultural courses taken

Card 1.15 Additional normalized data in the form of T-scores.

Column No.

1.15.1-2 Card identification (2df)

01 - Card 1.1
02 - Card 1.2
:
15 - Card 1.15 (This card is punched 15)

1.15.3-5 Person identification (3df)

1.15.6 Residence: father's occupation. Based on 1.11.58

0 - not a farm operator
1 - part-time farm operator
2 - full-time farm operator
y - no answer or not applicable

1.15.7 Occupational choices: Farm vs. nonfarm
Based on 1.11.42

0 - nonfarm
1 - farm
y - no answer

1.15.8-9 T-scores: Number of different occupational choices.
(OPMY Q II, 1, 2, 11, 12) (2df) Computed from 1.11.28

20 - twenty points
21 - twenty-one points
:
80 - eighty points
yy - no answer

1.15.10-11 T-scores: North-Hatt occupational choice prestige score:
Highest choice (OPMY Q II, 1, 2, 11, 12) (2df)
Computed from 1.11.29-30 See 1.15.8-9

1.15.12-13 T-scores: North-Hatt occupational choice prestige score:
Lowest choice (OPMY Q II, 1, 2, 11, 12) (2df)
Computed from 1.11.31-32 See 1.15.8-9

1.15.14-15 T-scores: North-Hatt occupational choice prestige score:
Final choice (OPMY Q II, 2 or 1) (2df)
Computed from 1.11.33-34 See 1.15.8-9

Column No.

1.15.16-17 T-scores: North-Hatt occupational choice prestige score: Free choice (OPMY Q II, 11) (2df)
Computed from 1.11.35-36 See 1.15.8-9

1.15.18-19 T-scores: North-Hatt occupational choice prestige score: Mature choice(OPMY Q II, 12) (2df)
Computed from 1.11.37-38 See 1.15.8-9

1.15.20-21 T-scores: Mean occupational choice prestige level: average occupational prestige scores for all different occupational choices among OPMY Q II, 1,2,11, 12 (2df)
Computed from 1.11.39-41 See 1.15.8-9

MASON HIGH SCHOOL BOYS, DEC. '58 to FEB. '59

CARD 1.16 Mason Questionnaire and OAS Data, 1st and 2nd testings.

COLUMN NO.

1.16.1-2 Card Identification (2df)
01 - Card 1.1
02 - Card 1.2
:
16 - This card is punched 16

1.16.3-5 Person identification (3df)

DECEMBER, 1958, QUESTIONNAIRE DATA

1.16.6-7 Age to nearest birthday (2df) (Question 2)
16 - sixteen years
:
18 - eighteen years
YY - no answer

1.16.8 Grade in school (Question 4)
0 - junior (11th grade)
1 - senior (12th grade)
Y - no answer

1.16.9 Father's occupation: farm vs. nonfarm (Question 5)
0 - not a farm operator
1 - is a farm operator
Y - no answer

1.16.10-11 North-Hatt Occupational Prestige score of father's occupation (Question 5), (2df)
34 - thirty-four
:
96 - ninety-six
YY - no answer

1.16.12 Number of best friends mentioned (Question 6)
0 - none
1 - one
:
5 - five
6 - six or more
Y - no answer

1.16.13 Number of best friends mentioned & who also choose respondent (Question 6) (e.g., mutual choices within the sample)
0 - none
1 - one
:
5 - five or more
Y - no answer

1.16.14-15 Chain group[1] identification number (group to which the respondent belongs) (2df)
01 - chain group one
02 - chain group two
:
nn - chain group nn
yy - does not belong to any chain group in sample

1.16.16-17 Peer group$_A$[2] identification number
01 - peer group one
02 - peer group two
:
nn - peer group nn
yy - does not belong to any peer group in sample

1.16.18-19 Peer group$_B$ identification number
01 - peer group one
02 - peer group two
:
nn - peer group nn
yy - does not belong to any peer group in sample

1.16.20-21 Peer group$_C$ IDENTIFICATION NUMBER
01 - peer group one
02 - peer group two
:
nn - peer group nn
yy - does not belong to any peer group in sample

1.16.22-23 Peer group$_D$ identification number
01 - peer group one
02 - peer group two
:
nn - peer group nn
yy - does not belong to any peer group in sample

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[1] Defined as a linked chain of individuals

[2] Individuals who choose and are chosen by eachother as best friends. (Two or more)

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OAS-R Scores: First testing, 12-58

1.16.24 Question One score (1st score R-ES)
0 - zero points
1 - one point
:
9 - nine points
Y - no answer

1.16.25 Question Two scores (1st score I-ES)
See 1.16.36

1.16.26 Question Three score (2nd score R-ES)
See 1.16.36

1.16.27 Question Four score (2nd score I-ES)
See 1.16.36

1.16.28 Question Five score (1st score R-30)
See 1.16.36

1.16.29 Question Six Score (1st score I-30)
See 1.16.36

1.16.30 Question Seven score (2nd score R-30)
See 1.16.36

1.16.31 Question Eight score (2nd score I-30)
See 1.16.36

1.16.32-33 Sum of scores for Q 1 & 3: R-ES (2df)
00 - zero points
01 - one point
:
18 - eighteen points
YY - no answer to one or both of Q 1 & 3

1.16.34-35 Sum of scores for Q 2 & 4: I-ES (2df)
See 1.16.44-45

1.16.36-37 Sum of scores for Q 5 & 7: R-30 (2df)
See 1.16.44-45

1.16.38-39 Sum of scores for Q 6 & 8: I-30 (2df)
See 1.16.44-45

1.16.40-41 Sum of scores for Q 1,3,5,7,: realistic choice level (2df)
00 - zero points
01 - one point
:
36 - thirty-six points
YY - no answer to any or all of Q 1,3,5,7

1.16.42-43 Sum of scores for Q 2,4,6,8: idealistic choice level (2df)
See 1.16.52-53

1.16.44-45 Sum of scores for Q 1,2,5,6: Split-half A_1
00 - zero points
01 - one point
:
36 - thirty-six points
YY - no answer to one or all of summed questions

1.16.46-47 Sum of scores for Q 3,4,7,8: Split-half B_1
See 1.16.44-45

1.16.48-49 Sum of scores for Q 1 through 8: level of occupational aspiration (2df)
00 - zero points
01 - one point
:
72 - seventy-two points
YY - no answer to any one or all of Q 1 through 8

OAS-R Scores (Form B) and v Achievement Scores
Second testing, 2-59

1.16.50 Question One score
See 1.16.36

1.16.51 Question Two score
See 1.16.37

1.16.52 Question Three score
See 1.16.38

1.16.53 Question Four score
See 1.16.39

1.16.54 Question Five score
See 1.16.40

1.16.55 Question Six score
See 1.16.41

1.16.56 Question Seven score
See 1.16.42

1.16.57 Question Eight score
See 1.16.43

1.16.58-59 Sum of Q 1 & 3: R-ES (2df)
See 1.16.44-45

1.16.60-61 Sum of Q 2 & 4: I-ES (2df)
See 1.16.46-47

1.16.62-63 Sum of Q 5 & 7: R-30 (2df)
See 1.16.48-49

1.16.64-65 Sum of Q 6 & 8: I-30 (2df)
See 1.16.50-51

1.16.66-67 Sum of Q 1,3,5,7: realistic choice level (2df)
See 1.16.52-53

1.16.68-69 Sum of Q 2,4,6,8: idealistic choice level (2df)
See 1.16.54-55

1.16.70-71 Sum of scores for Q 1,2,5,6: Split-half A_2
See 1.16.44-45

1.16.72-73 Sum of scores for Q 3,4,7,8 Split-half B_2
See 1.16.44-45

1.16.74-75 Sum of scores for Q 1 through 8: level of occupational aspiration (2df)
See 1.16.56-57

1.16.76-77 v Achievement scores (2df)
00 - zero points (low v Achievement)
01 - one point
02 - two points
:
36 - thirty-six points (high v Achievement)

1.16.78-80 Grade Point Average for school year 1958-1959
000 - zero points
:
100 - 1.00 (D average)
:
200 - 2.00 (C Average)
:
300 - 3.00 (B Average)
:
400 - 4.00 (A Average)
YYY - no data on grade point average