By<br>BOB D. RHEA<br>B<br>Bachelor of Science Oklahoma State University Stillwater, Oklahoma 1956<br>Master of Science Oklahoma State University<br>Stillwater, Oklahoma<br>1957

Submitted to the Faculty of the Graduate School of the Oklahoma State University in partial fulfillment of the requirements
for the degree of
DOCTOR OF PHILOSOPHY
August, 1962

$$
\begin{aligned}
& 2640 \\
& 19620 \\
& R 4690 \\
& \text { Cop .3 }
\end{aligned}
$$

Copyright, 1962, by Bob D. Rhea


THE CONSTRUCTION AND ANALYSIS OF TWO FORCED-GHOIGE
QUESTIONNAIRES MEASURING ATTITUDES
TOWARD ABSENTEEISM

Thesis Approved:


## PREFACE

Excessive absences may be one of the causes of the downfall of many students. Instructors rarely even inquire about the causes of a student's absence, much less attempt to understand if the absence represents a serious problem which needs skilled treatment and thereby miss many opportunities to help students.

The purpose of this study is to develop instruments designed to measure students' attitudes toward class cutting and to ascertain the transparency of these instruments. The writer hopes that by use of these instruments counselors and guidance workers may beneficially help students in their adjustment to the college environment.

The writer wishes to express thanks to the many people who have helped make this study possible. To Dr. William W. Rambo, who served as chairman of the doctorial committee, goes sincere appreciation for his assistance and perceptive insights. Indebtedness is acknowledged to the other members of the committee, Dr. Harry K. Brobst, Dean Edward C. Burris, and Dr. Robert W. Scofield, for their interest, guidance, and assistance in various phases of the study. Particular thanks is due to Norman D. Smith for his ideas and comments.

Special thanks are due to Gary W. Evans, Mrs. Maxine Harber, Miss Leevera Pepin, Thomas R. Schill, Norman D. Smith, and to the members of the committee who willing relinquished valuable class time so that the data for the study could be gathered. The writer is also indebted to Dr. Royal H. Bowers, Dean James M. Miller, Dr. Ida T. Smith, John A.

Hirschlein, Elmer L. Johnson, and Mrs. Coral L. Gates for their help during this study.

The writer also wishes to express his gratitude to his wife, Sonja, for the preparation of this manuscript. Without her sacrifices and understanding help this study would not have been possible.

## TABLE OF CONTENTS

Chapter Page
I. INTRODUCTION ..... 1
Review of the Literature ..... 1
II. METHOD ..... 10
Construction of the Instruments ..... 10
Development of the Statements ..... 11
Development of the Favorability Indices ..... 13
Method Used in Developing the Item Pairs for Both Form A and Form B. ..... 14
Development of the Item Discrimination Indices ..... 21
Item Weights ..... 24
Selection of Item Pairs for the Final Forms ..... 26
III. THE EVALUATION OF THE FORCED-CHOICE INSTRUMENTS ..... 38
Cross-Validation of the Instruments ..... 38
Reliability of the Instruments ..... 39
Normative Data Developed on Group D. ..... 41
Transparency of the Instruments ..... 41
IV. SUMMARY AND CONCLUSIONS ..... 49
Conclusions ..... 50
Bibliography ..... 52
APPENDIX A ..... 54
APPENDIX B ..... 61
APPENDIX C ..... 78
APPENDIX D ..... 81

## LIST OF TABLES

Table Page1 Favorability and Discrimination Indices of the Pairs of Itemson Form A . . . . . . . . . . . . . . . . . . . . . . . . . . 15
2 Favorability and Discrimination Indices of the Pairs of Items on Form B . . . . . . . . . . . . . . . . . . . . . . . . . . 18
3 Scoring System Which was Used to Develop the Scoring Keys for Both Form A and Form B. . . . . . . . . . . . . . . . . . . . 25
4 Final Form of Form A Except That the Item Numbers Were Substituted for the Letters A and B . . . . . . . . . . . . . . . . 28
5 Final Form of Form B Except That the Item Numbers Were Substituted for the Letters A and B . . . . . . . . . . . . . . . . 33

## I. INTRODUCTION

From the viewpoint of society absenteeism can be viewed as a factor in maladjustment. The worker who has a high record of absences may be considered to exhibit a certain amount of maladjustment toward his work situation. Likewise, the student whose class attendance is poor may be maladjusted to the educational structure.

Admission to any public school is a privilege and an opportunity. It represents an investment by the people as well as the student. It is important that the student shows responsibility for this obligation by regular class attendance. When a student does not meet and take advantage of his classes, money is being wasted and every citizen has a right to be concerned and interested in this problem.

Students' absences are not an isolated problem faced only by the administration at Oklahoma State University; instead, class absences may be considered to be a typical problem which is faced by many other colleges and universities (Lotz, 1954).

Since it was desired to develop instruments to measure attitudes toward absenteeism in a university setting it was deemed necessary that one review the research which had been done in this area in order to provide background for the proposed instruments.

Review of the Literature

There are many studies which seem to indicate that no matter what approach an industrial organization takes to reduce absenteeism it is going
to have some successful results (New York Personnel Management Association, 1950). Thus, if the company decides to "get tough" or to be understanding concerning absences, they will help alleviate the problem of absenteeism somewhat. It may be possible that this finding might hold true when colleges are considered.

These findings seem to point to the conclusion that one should look at the individual's motives, attitudes and personality to grasp the significance of absenteeism.

Brayfield and Crockett (1955) in a review of the relationship be~ tween job satisfaction and productivity, found that the available empirical studies showed hardly any evidence of a relationship between absenteeism and morale or satisfaction when individual data were considered. However, there does seem to be some sort of relationship between the two when studies utilizing group design was considered. Even here, however, there were conflicting results and it was only by the process of totaling the number of positive and negative results that the authors arrived at a positive relationship between morale and absenteeism.

Brayfield and Crockett describe this relationship as being very low and hard to obtain, and it probably indicates a very complex sort of relationship instead of a simple direct one.

Numerous other studies in the literature indicate that morale should not be considered as a summation of many other factors which are assumed to be related to job satisfaction (Gilson, 1958; Herzberg, Mausner, \& Snyderman, 1959; Kahn \& Katz, 1953). The writer thinks that it is reasonable to assume that this same type of situation occurs when colleges are considered.

From the above considerations, it seems reasonable to assume that an
instrument developed to measure attitudes or behavior toward absenteeism may prove to be worthwhile, for even if absenteeism happens to be related to "general morale," the relationship is probably not a high one and other factors need to be considered in analyzing the problem of absenteeism.

It is very probable and self-evident that the reasons for being absent vary from one person to another, from time to time, and from situation to situation. Some attempts have been made to isolate the factors which are mainly involved in absenteeism.

An especially extensive study was conducted by Jackson (1944) in a machine shop employing several thousand workers from which a representative sample of five hundred and fifty employees working in eight different departments was drawn for the study. The results confirm the often noticed observation that the majority of absences was due to a small percentage of employees. The design of the study (Jackson, 1944) utilized the technique of interviewing the employees who were above average in absentee rate. From the interview data six reasons were extracted for absenteeism. These factors, plus their relative per cent of occurrence, are as follows:

1. Poor work habits, indicated by trouble and fighting with other workers or foremen, tardiness, horseplay, and bad previous work records$6 \%$
2. Personal adjustment, indicated by separation, divorce, family quarrels, symptoms of psychoneurosis, unstable personal life, drinking, breach of peace, etc.9\%
3. Dissatisfaction with work, indicated by many transfers,
complaints about pay or working conditions, lack of in
terest or ambition, complaints about the management. ..... $16 \%$
4. Irresponsibility, indicated by unexplained absenteeism,
incapability of being left on own resources, not valu
ing the job but thinking leisure time more important,
no loyalty to the company or job. ..... $17 \%$
5. Outside difficulties, indicated by outside business or
shopping problems, home responsibilities, transportation
and housing difficulties, moving, visits to out-of-state
homes ..... $17 \%$
6. Sickness or fatigue, indicated by evidence of sickness,
```
doctor's or hospital's care, accidents resulting in
loss of time and complaints about health, fatigue, etc.... 35% (Jackson, 1944, pp. 291-292).
```

Thus, it is readily seen that at best only 35 per cent of the absences were due to reasons of sickness or fatigue, while 65 per cent of the reasons for absences were more or less directly related to personality and attitudinal factors. More than half of the employees interviewed indicated more than one of the six major reasons for being absent.

Even if sickness or fatigue was the largest single factor these results seem to indicate that it would be possible to develop instruments designed to measure attitudes or behavior toward absenteeism.

A somewhat parallel study, though less exhaustive, was conducted on a college population by Lotz (1954). This study was conducted by means of a questionnaire given to certain students to determine some of the reasons for class cutting, so that a more effective administrative policy toward class cutting could be enacted. In relation to the present investigation, the important findings from Lotz's study were as follows:

1. Students had a lack of interest or complete boredom in class.
2. Students were required to take classes that they felt would not benefit them in any way.
3. Instructors had poor methods of teaching.
4. Instructors had little interest in class and class participation.
5. Instructors had insufficient interest in the subject matter.
6. The system of excuses approved by the Deans was faulty.
7. There was no uniformity among teachers in handing class cuts. (Lotz, 1954, p. 294).

Thus, it is very evident that the major reasons for class cutting in the above study were attitudinal in nature.

It is apparent that absenteeism can be divided into two large deter-
mining areas. One is situational in nature, that is, absences are related to factors which are peculiar to each situation. The other area is more general and cuts across individual situations.

Naylor and Vincent (1959) conducted a study in which three items normally found on any application blank (age, marital status, number of dependents) were used on two hundred and twenty women clerical workers employed in a large midwestern manufacturing company in an attempt to predict absenteeism. Age and marital status showed no significant relationship to the criterion, however, as might be expected, number of dependents was significantly related to absenteeism; this relationship was positive. It would appear to be somewhat easier to predict absences in a particular situation or department of a company by use of biographical data (Naylor \& Vincent, 1959), however, it should prove to be more difficult to build scales to measure attitudes toward absenteeism for the scales would have to be more general in nature for they would be dependent mainly upon the psychological factors in the particular situation which are associated with absences in general. The writer felt that the development and analysis of instruments of this type was a justifiable undertaking. Thus, one of the purposes of this study was to determine whether or not it was possible to construct instruments to measure attitudes toward absenteeism in a college environment. The instruments were developed on a number of different classes taught by a number of different instructors. The students in these classes were from various colleges within the university and represented all levels of scholastic classification.

One of the major problems of predicting who will be absent is that most instruments which could be developed for this purpose can be easily
falsified. Thus, if an applicant who wants a eertain job can distinguish the desired response, he is inclined to give a distorted picture of himself. Long standing criticisms have been directed toward personality and attitudinal instruments which are employed in \$ituations where the subject is likely to falsify his responses. Numerous investigators have found that most instruments of this type (especially inventories and questionnaires) are very readily falsified. In this connection Meehl and Hathaway state:

It is a significant sociological fact about the psychologist that in spite of the strong reasons, both a priori and experimental, for accepting the reality of this phenomenon in objective personality testing, very few systematic efforts have been made to correct for it or to overcome it...It almost seems as though we inventory makers were afraid to say too much about the problem because we had no effective solution for it, but it was too obvious a fact to be ignored so it was met by a polite nod. Meanwhile the scores obtained are subjected to varied and "precise" statistical manipulations which impel the student of behavior to wonder whether it is not the aim of the personality testers to get as far away from any unsanitary contact with the organism as possible (Meeh1 \& Hathaway, 1946, pp. 526-527).

There have been just two, more or less adequate, major approaches which have been developed to curtail the amount of transparency (fakeability) of psychological scales. One of these being the construction of correction factors, such as the $K$ factor which was developed for the Minnesota Multiphasic Personality Inventory by Meehl and Hathaway (1946); the other being a more recent development in scaling theory. The proponents of the latter approach (Baier, 1951; Edwards, 1957; Ghise11i, 1954; Sessions, 1948) hoped to eliminate or minimize the transparency of their instruments by the use of the forced-choice technique.

Briefly, the essential characteristics of the forced-choice procedure are to present, simultaneously, items which look alike to the individual who is completing the personality scale or questionnaire and yet
the items have differing significances. The individual's task is to pick the one item which is most descriptive of himself. The items are usually chosen to look alike in terms of their favorableness (social desirability) when they are used to describe other individuals. The favorability index for each item is the index which describes the degree of favorableness of that item and it is obtained by scaling items on a favorable-unfavorable continuum. The discrimination index for each item is the index which describes the degree to which that item differentiates between a high and a low criterion group.

The results of various investigations indicate, however, that both standard personality measures and forced-choice measures of personality can be faked (Bass, 1957; Borislow, 1958; Longstaff \& Jurgensen, 1953; Maher, 1959; Meeh1 \& Hathaway, 1946; Wesman, 1952; and others).

Even if it should prove impossible to reduce the possibility of falsification by use of the forced-choice technique, in the writer's opinion, it would still be desirable to ascertain whether it is possible to develop adequate scales to measure attitudes toward absenteeism (when motivation to cheat is minimal) and to investigate the general feelings of the population toward absenteeism.

In a review of the available empirical literature the present writer found no evidence of a scale which attempted to measure attitudes toward absenteeism.

Since it is desirable to reduce falsification, the utilization of the forced-choice technique might be useful in developing attitude scales toward absenteeism. This was the approach which was taken in this investigation.

One of the most important, if not, the most important component of
the forced-choice technique which is related to its fakeability is the favorability index (Edwards, 1957; Morrison \& Maher, 1958; Sessions, 1948; Wherry, 1959). This is usually obtained by having a person rate the favorableness of each statement on a five point scale of favorableness. The number of categories used to determine the favorableness of each item may vary; Ghiselli (1954) used only three categories (favorable, neutral, unfavorable) for his "self-description" scale while Highland and Berkshire (1953) used a five point scale for their study.

The writer of this study felt that it would be desirable to ascertain whether or not the ability to falsify a forced-choice scale was at least partially dependent upon the scaling method which was used to arrive at the favorability index for each statement. A review of the previous empirical literature gives evidence that forced-choice scales can be faked. Since the favorability index is an important factor in the transparency of the forced-choice technique the writer felt that it might be useful to compare the transparency of a forced-choice scale which used a rather simple psychological scaling technique (median) to derive the favorability index with the transparency of another forcedchoice scale which used a more sophisticated psychological scaling technique (successive intervals) to derive the favorability index. The logic employed here is the more finely or accurately that the items can be paired in terms of favorableness the less transparent the item pairs will be. To implement this purpose, two different scaling techniques were utilized in obtaining the favorability indices and the final form of the instruments were administered under instructions designed to obtain more or less "truthfu7" answers and under a "beat" situation in which the subjects were instructed to make the best possible score.

The major assumptions of the forced-choice scaling technique in connection with attitudes toward absenteeism are as follows:

1. Any real difference which exists between students in class cutting behavior can be described in terms of verbal statements.
2. These statements differ in the extent to which students generally tend to use them in describing other students, that is, in general favorableness, and this tendency can be determined statistically.
3. These statements also differ in the extent to which they characterize students at one extreme of the true scale of "class-cutters" as opposed to students at the other extreme and this difference can be determined statistically.
4. Pairs of statements can be selected such that they are equal in favorability but different in the extent to which they characterize students at the extremes of the distribution.

The purpose of this study was to determine whether or not it was possible to build instruments to measure attitudes toward absenteeism by using the forced-choice technique and incidentally to ascertain whether or not the method used to derive the favorability index was related to the transparency of the forced-choice technique.

## II. METHOD

Construction of the Instruments

The five hundred and one subjects* used in this study were students who were enrolled at Oklahoma State University during the fall and spring terms of 1961-62.

There were five groups of subjects. Within one of these groups (Group C) there were two sub-groups--one which was high in absenteeism and the other was low in this factor. The experimental conditions assigned to the various groups and the number of students within each group was as follows:

Group A. Subjects in this group were required to write essays describing both a high and a low "class-cutter." There was a total of one hundred and twenty-two subjects within this group; sixty were females and sixty-two were males, forty-five of these subjects were lowerclassmen, sixty-eight were upperclassmen, and nine were graduate students.

Group B. Subjects in this group were required to judge on a seven point scale the favorableness of each phrase or statement which had been developed from the essays obtained from Group A and other available sources. There was a total of thirty-eight subjects within this group; twenty-two
*This does not include forty-three subjects who were discarded for incomplete forms or dual answers on the forms.
were females and sixteen were males, twenty-seven of these subjects were lowerclassmen and eleven were upperclassmen.

Group C. Subjects in this group were given the experimental forms. These forms were constructed by pairing the phrases and statements in such a manner that each pair of statements was as nearly equal as possible in favorableness. Subjects were asked to indicate which of the two statements was most descriptive of themselves. Group $C$ was divided into two sub-groups. Subjects in Sub-Group 1 C were high in class cuts while the subjects in Sub-Group 2 C were low in class cuts. The data from these experimental forced-choice forms were used to develop the empirical scoring keys. This was the only condition which required dichotomization of the criterion variable. Groups C and D had a total of three hundred and two students; within these groups one hundred and forty-four were females and one hundred and fifty-eight were males, one hundred and eighty-seven of these subjects were lowerclassmen, one hundred and two were upperclassmen and thirteen were graduate students. Group C had a total of two hundred and two students and Group D had a total of one hun-2 dred students; the subjects for Groups $C$ and $D$ were collected at the same time and randomly assigned to the two groups.

Group D. Subjects in this group were used to cross-validate the forced-choice forms. The total number of perceived class cuts for each student was correlated with his total score on the forced-choice forms.

Group E. Subjects in this group were required to complete the forcedchoice forms under "honest and beat" conditions. There was a total of thirty-nine students; seventeen were females and twenty-two were males.

Development of the Statements

There were one hundred and twenty-two subjects in Group A. Approx-
imately fifty students were in an introductory psychology class; forty students were in a junior level psychology class, and thirty-two students were in a junior level home economics class. These students were asked to write an essay describing both a person who was high in class cutting behavior and one who was low in class cutting behavior. In writing these essays, the stưdents were asked to consider the reasons and feelings which they felt were responsible for a person being either a high or a low "class-cutter." Each student was given a six page booklet of ordinary writing paper in which the essays were written. The first page of these booklets was filled by the instructions which were read to the subjects (see Appendix A-1).

These students (Group A) were asked to give only their sex and school classification. They were assured that only the author of this paper would see their essays.

After the essays were collected they were subjected to an analysis in order to identify the various concepts and ideas which were used to describe a high and low "class-cutter." A large number of phrases and statements were obtained, and these were supplemented by the investigator. The investigator also interviewed four persons who were concerned with student adjustment (see Appendix C). These interviews were analyzed for possible items.

A total of three hundred and seventy-one statements were constructed and typed on three by five index cards.

These statements were classified independently by four expert judges (the judges included three psychology students at the graduate level and one professor of psychology) into an unavoidable situational category (such as a flat tire, bad weather, etc.), an attitudinal category, and a
redundant and/or inadequate category (see Appendix D). An item was accepted for further consideration only when three of the four judges agreed that the item was attitudinal in nature. No item was accepted for further analysis unless it was placed in the attitudinal category. of the total number of items only one item was eliminated for this reason. However, seventy-nine items were eliminated because they were judged to be redundant. This left a total of two hundred and ninty-one items.

Development of the Favorability Indices

The two hundred and ninty-one items concerning absences which were used to derive the two favorability indices were compiled into a regular test format with a seven and seven sixteenth inch line below each statement which was divided into seven equal segments. The instructions which were read to the subjects appeared on the cover sheet of the twenty-seven page booklet. Thirty-eight subjects (Group B) were asked to indicate on a seven point scale how favorable the statements would be if they were used to describe a student (see Appendix A-2). From these data two different favorability indices for each item were computed (see Appendix B).

One of the favorability indices was obtained by simply summing the number of times an item was placed in each category (each item was given the weight of the category into which it was sorted) and using the median as the scale value for the statement. A nomograph for determining the median was used to obtain the median value of each statement (Jurgensen, 1943). It was possible to determine the medians to two decimals by use of this nomograph (see Appendix B). The other favorability index for each item was determined by using the method of successive intervals to arrive at the scale values (Edwards, 1957) (see Appendix B).

## Method Used in Developing the Item Pairs

for Form $A$ and Form B

The experimental forms were constructed by pairing the phrases and statements in such a way that each pair of statements was as nearly equal as possible in favorableness, plus the additional requirement that the items in each pair had to contain one item that was taken from a description of a low "class-cutter" while the other item was constructed from a description of a high "class-cutter." In constructing item pairs one usually has two indices for each item at the time of item pairing; one is the favorability index, the other is the discrimination index. Since there was no discrimination index available at the time of the item pairing for this investigation the writer reasoned that in combining items it would be possible to maximize the chances for an item pair to reach significance if one item was culled from a description of a low "classcutter" while the other item was culled from a description of a high "class-cutter." In other words, the two extremes (high and low "classcutter") were used as the basis for hypotheses about the probable significance of each item. This approach to forced-choice item pairing is described by Ghiselli (1954). One experimental form (Form A) utilized the favorability indices arrived at by the method of successive intervals in matching the pairs of items (see Table 1); the other form (Form B) used the favorability indices arrived at by using the median as the scale values of the statements (see Table 2).

Form A had a total of seventy-one pairs of items; thirty-three of the pairs were favorable while the remaining thirty-eight pairs were unfavorable.

Form B also had a total of seventy-one pairs of items; thirty-three

TABLE 1

FAVORABILTTY AND DISCRIMINATION INDICES
OF THE PAIRS OF ITEMS ON FORM A

| Number of Item Paix | Number of Item | Scale <br> value | tvalue | Number of Item Pair | Number of Ifem | Scale value | tvalue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 57 | 2.66 | $2.42{ }^{1}$ | 15 | 128 | 3.30 | $6.48{ }^{4}$ |
|  | 212 | 2.69 | $2.97{ }^{2}$ |  | 268 | 3.28 | $6.33{ }^{4}$ |
| 2 | 87 | 3.26 | $2.34{ }^{1}$ | 16 | 59 | 4.94 | $2.27{ }^{1}$ |
|  | 100 | 3.31 | $2.27{ }^{1}$ |  | 106 | 4.94 | $2.34{ }^{1}$ |
| 3 | 197 | 5.15 | $2.11{ }^{1}$ | 17 | 100 | 3.31 | $2.27{ }^{1}$ |
|  | 85 | 5.16 | $2.34{ }^{1}$ |  | 18 | 3.37 | $2.34{ }^{1}$ |
| 4 | 163 | 3.58 | . 00 | 18 | 200 | 4.90 | 1.64 |
|  | 151 | 3.50 | . 00 |  | 136 | 4.91 | 1.48 |
| 5 | 140 | 5.06 | 1.56 | 19 | 173 | 2.69 | $6.09{ }^{4}$ |
|  | 182 | 5.06 | 1.80 |  | 212 | 2.69 | $6.40^{4}$ |
| 6 | 68 | 3.73 | . 86 | 20 | 26 | 4.65 | $4.69{ }^{4}$ |
|  | 30 | 3.74 | . 70 |  | 250 | 4.67 | $4.76{ }^{4}$ |
| 7 | 173 | 2.61 | $5.55{ }^{4}$ | 21 | 105 | 4.80 | $3.52{ }^{4}$ |
|  | 78 | 2.68 | $5.62^{4}$ |  | 89 | 4.80 | $3.28{ }^{3}$ |
| 8 | 268 | 3.28 | 3.914 | 22 | 146 | 3.64 | $4.69{ }^{4}$ |
|  | 87 | 3.26 | $3.83{ }^{4}$ |  | 76 | 3.64 | $4.69^{4}$ |
| 9 | 85 | 5.16 | $2.42{ }^{1}$ | 23 | 128 | 3.30 | $3.36{ }^{3}$ |
|  | 202 | 5.12 | $2.27{ }^{1}$ |  | 100 | 3.31 | $3.20{ }^{3}$ |
| 10 | 1 | 5.00 | $4.14{ }^{4}$ | 24 | 212 | 2.69 | $5.08{ }^{4}$ |
|  | 191 | 5.04 | $4.06{ }^{4}$ |  | 88 | 2.66 | 4.76 |
| 11 | 283 | 5.10 | $2.81{ }^{2}$ | 25 | 134 | 5.72 | 8.204 |
|  | 221 | 5.11 | $2.73{ }^{2}$ |  | 37 | 5.74 | 8.44 |
| 12 | 231 | 3.84 | . 63 | 26 | 102 | 4.71 | 1.72 |
|  | 79 | 3.84 | . 78 |  | 2 | 4.71 | 1.80 |
| 13 | 212 | 2.69 | $5.31{ }^{4}$ | 27 | 96 | 5.25 | 1.95 |
|  | 277 | 2.66 | $5.08{ }^{4}$ |  | 234 | 5.21 | 1.80 |
| 14 | 181 | 5.14 | 1.17 | 28 | 9 | 2.42 | . 00 |
|  | 85 | 5.16 | 1.48 |  | 201 | 2.43 | . 00 |

TABLE 1 (Continued)

| Number of Item Pair | Number of Item | Scale <br> value | tvalue | Number of Item Pair | Number of Item | Scale value | $t-$ value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29 | 15 | 2.47 | $5.47{ }^{4}$ | 44 | 245 | 2.58 | $4.06{ }^{4}$ |
|  | 73 | 2.46 | $5.31{ }^{4}$ |  | 5 | 2.65 | $3.98{ }^{4}$ |
| 30 | 148 | 2.46 | $2.73{ }^{2}$ | 45 | 154 | 2.65 | $4.30^{4}$ |
|  | 211 | 2.47 | $3.12{ }^{3}$ |  | 277 | 2.66 | $4.22^{4}$ |
| 31 | 12 | 2.49 | $3.59{ }^{4}$ | 46 | 43 | 1.84 | $4.06^{4}$ |
|  | 172 | 2.50 | $3.44{ }^{3}$ |  | 233 | 1.84 | $3.98{ }^{4}$ |
| 32 | 21 | 2.56 | $4.37{ }^{4}$ | 47 | 249 | 2.42 | $3.83{ }^{4}$ |
|  | 171 | 2.53 | $3.98{ }^{4}$ |  | 287 | 2.40 | $3.36{ }^{3}$ |
| 33 | 260 | 2.60 | $3.75{ }^{4}$ | 48 | 208 | 2.45 | 1.56 |
|  | 236 | 2.59 | $3.75{ }^{4}$ |  | 211 | 2.47 | 1.87 |
| 34 | 7 | 2.62 | $2.58{ }^{3}$ | 49 | 21 | 2.56 | $4.61{ }^{4}$ |
|  | 20 | 2.63 | $2.34{ }^{3}$ |  | 220 | 2.53 | $4.30^{4}$ |
| 35 | 38 | 2.65 | $5.39{ }^{4}$ | 50 | 260 | 2.60 | $5.55{ }^{4}$ |
|  | 245 | 2.64 | $5.47{ }^{4}$ |  | 7 | 2.61 | $5.70^{4}$ |
| 36 | 20 | 2.63 | . 08 | 51 | 255 | 2.64 | $4.37^{4}$ |
|  | 255 | 2.64 | . 23 |  | 5 | 2.65 | $4.30^{4}$ |
| 37 | 247 | 2.65 | . 08 | 52 | 88 | 2.66 | $3.36{ }^{3}$ |
|  | 241 | 2.65 | . 08 |  | 141 | 2.68 | $3.59^{4}$ |
| 38 | 271 | 1.93 | $2.42{ }^{1}$ | 53 | 15 | 2.47 | $3.83{ }^{4}$ |
|  | 262 | 1.93 | $2.66{ }^{2}$ |  | 107 | 2.46 | $3.52^{4}$ |
| 39 | 249 | 2.42 | $4.53{ }^{4}$ | 54 | 55 | 2.50 | $3.59{ }^{4}$ |
|  | 118 | 2.43 | $4.21{ }^{4}$ |  | 248 | 2.50 | $3.91{ }^{4}$ |
| 40 | 126 | 2.47 | $2.27{ }^{1}$ | 55 | 236 | 2.59 | $4.61{ }^{4}$ |
|  | . 15 | 2.47 | $2.34{ }^{1}$ |  | 23 | 2.62 | $4.61{ }^{4}$ |
| 41 | 108 | 2.50 | $4.61{ }^{4}$ | 56 | 57 | 2.66 | $2.73{ }^{2}$ |
|  | 12 | 2.49 | $4.61{ }^{4}$ |  | 154 | 2.65 | $3.05{ }^{3}$ |
| 42 | 254 | 2.58 | 1.41 | 57 | 9 | 2.42 | 1.87 |
|  | 21 | 2.56 | 1.48 |  | 121 | 2.43 | 1.64 |
| 43 | 7 | 2.61 | $5.47{ }^{4}$ | 58 | 211 | 2.47 | $3.98{ }^{4}$ |
|  | 23 | 2.62 | $5.39^{4}$ |  | 44 | 2.45 | $3.91{ }^{4}$ |

TABLE 1 (Continued)

| Number of Item Pair | Number of Item | Scale value | tvalue | Number of Item Pair | Number of Item | Scale value | tvalue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 5.9 | 236 | 2.59 | $3.12{ }^{3}$ | 66 | 21 | 2.56 | 1.41 |
|  | 254 | 2.58 | $3.05^{3}$ |  | 265 | 2.53 | 1.17 |
| 60 | 38 | 2.65 | $5.16{ }^{4}$ | 67 | 137 | 2.43 | . 47 |
|  | 154 | 2.65 | $5.39^{4}$ |  | 9 | 2.42 | . 16 |
| 61 | 224 | 2.43 | $2.42{ }^{1}$ | 68 | 245 | 2.58 | $2.42{ }^{1}$ |
|  | 249 | 2.42 | $2.66{ }^{2}$ |  | 20 | 2.63 | $2.27^{1}$ |
| 62 | 209 | 2.57 | 3.283 | 69 | 38 | 2.65 | $6.17^{4}$ |
|  | 254 | 2.58 | $3.12{ }^{3}$ |  | 7 | 2.61 | 6.254 |
| 63 | 57 | 2.66 | $2.42{ }^{1}$ | 70 | 15 | 2.47 | 3.834 |
|  | 123 | 2.68 | $2.66{ }^{2}$ |  | 116 | 2.47 | 3.754 |
| 64 | 12 | 2.49 | $2.27{ }^{1}$ | 71 | 9 | 2.42 | $3.83{ }^{4}$ |
|  | 266 | 2.50 | $2.19{ }^{1}$ |  | 118 | 2.43 | $3.75{ }^{4}$ |
| 65 | 247 | 2.65 | 2.271 |  |  |  |  |
|  | 255 | 2.64 | $2.34{ }^{1}$ |  |  |  |  |

[^0]TABLE 2
FAVORABILITY AND DISCRIMINATION INDICES
OF THE PAIRS OF ITEMS ON FORM B

| Number of Item Pair | Number <br> of Item | Scale <br> value | tvalue | Number of Item Pair | Number <br> of Item | Scale value | tvalue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 286 | 5.25 | $6.80{ }^{4}$ | 15 | 24 | 6.21 | 1.48 |
|  | 146 | 5.23 | $6.87{ }^{4}$ |  | 25 | 6.16 | 1.56 |
| 2 | 163 | 5.15 | . 70 | 16 | 146 | 2.23 | 3.984 |
|  | 75 | 5.13 | . 06 |  | 263 | 5.28 | $4.06^{4}$ |
| 3 | 191 | 5.93 | 9.064 | 17 | 159 | 5.82 | 1.33 |
|  | 37 | 5.94 | 9.194 |  | 200 | 5.83 | . 78 |
| 4 | 114 | 5.65 | 1.561 | 18 | 100 | 4.75 | $3.12{ }^{3}$ |
|  | 26 | 5.64 | $1.95{ }^{1}$ |  | 264 | 4.74 | $3.28{ }^{3}$ |
| 5 | 268 | 4.73 | $5.08{ }^{4}$ | 19 | 123 | 4.50 | 4.614 |
|  | 264 | 4.74 | $5.16{ }^{4}$ |  | 251 | 4.50 | 4.534 |
| 6 | 259 | 4.91 | 6.254 | 20 | 101 | 5.00 | $3.52{ }^{4}$ |
|  | 101 | 5.00 | 6.094 |  | 70 | 5.03 | 3.834 |
| 7 | 251 | 4.50 | . 16 | 21 | 40 | 5.92 | 6.174 |
|  | 141 | 4.50 | . 03 |  | 191 | 5.93 | $5.86{ }^{4}$ |
| 8 | 197 | 6.02 | 1.56 | 22 | 78 | 4.50 | 7.424 |
|  | 227 | 6.02 | 1.41 |  | 116 | 4.50 | 7.424 |
| 9 | 101 | 5.00 | $6.25{ }^{4}$ | 23 | 153 | 6.06 | . 47 |
|  | 65 | 5.00 | $6.33{ }^{4}$ |  | 169 | 6.06 | . 23 |
| 10 | 17 | 5.14 | 3.594 | 24 | 191 | 5.93 | 4.614 |
|  | 163 | 5.15 | 3.594 |  | 135 | 5.92 | $4.61{ }^{4}$ |
| 11 | 237 | 5.83 | 1.56 | 25 | 116 | 4.50 | 6.954 |
|  | 200 | 5.83 | 1.64 |  | 123 | 4.50 | 7.034 |
| 12 | 117 | 5.66 | $3.05{ }^{3}$ | 26 | 146 | 5.23 | 1.25 |
|  | 26 | 5.64 | $2.81{ }^{2}$ |  | 177 | 5.27 | 1.48 |
| 13 | 101 | 5.00 | 4.534 | 27 | 29 | 4.65 | $3.36{ }^{3}$ |
|  | 72 | 4.91 | $4.61{ }^{4}$ |  | 268 | 4.73 | $3.20{ }^{3}$ |
| 14 | 78 | 4.50 | 3.914 | 28 | 244 | 5.17 | 3.754 |
|  | 251 | 4.50 | $3.83{ }^{4}$ |  | 163 | 5.15 | $3.83{ }^{4}$ |

TABLE 2 (Continued)

| Number of Item Pair | Number of Item | Scale value | tvalue | Number of Item Pair | Number of Item | Scale value | tvalue |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 29 | 81 | 6.00 | $2.73{ }^{2}$ | 44 | 215 | 2.30 | 1.33 |
|  | 181 | 6.00 | $2.50{ }^{1}$ |  | 260 | 2.32 | 1.48 |
| 30 | 116 | 4.50 | 5.084 | 45 | 95 | 3.30 | 7.194 |
|  | 141 | 4.50 | $5.23{ }^{4}$ |  | 241 | 3.34 | $7.11{ }^{4}$ |
| 31 | 152 | 5.00 | $2.11{ }^{1}$ | 46 | 249 | 3.08 | 1.02 |
|  | 101 | 5.00 | 2.031 |  | 288 | 3.00 | 1.17 |
| 32 | 26 | 5.64 | 6.644 | 47 | 242 | 1.50 | 1.48 |
|  | 93 | 5.67 | $6.64{ }^{4}$ |  | 176 | 1.57 | 1.41 |
| 33 | 82 | 5.81 | 2.191 | 48 | 285 | 2.75 | 1.80 |
|  | 200 | 5.83 | 2.031 |  | 3 | 2.74 | 1.80 |
| 34 | 63 | 2.39 | . 16 | 49 | 216 | 2.91 | . 78 |
|  | 185 | 2.39 | . 00 |  | 113 | 2.90 | . 86 |
| 35 | 175 | 2.94 | . 20 | 50 | 254 | 2.30 | . 70 |
|  | 39 | 2.94 | . 19 |  | 215 | 2.30 | . 47 |
| 36 | 12 | 3.83 | . 08 | 51 | 139 | 3.23 | 1.02 |
|  | 211 | 3.83 | . 02 |  | 248 | 3.21 | 1.17 |
| 37 | 95 | 3.30 | 5.474 | 52 | 113 | 2.90 | . 23 |
|  | 209 | 3.34 | 5.394 |  | 122 | 2.91 | . 08 |
| 38 | 241 | 3.34 | 1.56 | 53 | 232 | 2.12 | 1.56 |
|  | 127 | 3.29 | 1.64 |  | 282 | 2.11 | 1.48 |
| 39 | 35 | 2.62 | . 46 | 54 | 80 | 2.39 | 2.031 |
|  | 49 | 2.62 | . 23 |  | 63 | 2.39 | $2.27{ }^{1}$ |
| 40 | 256 | 1.67 | 1.64 | 55 | 246 | 3.50 | 1.33 |
|  | 261 | 1.68 | 1.64 |  | 245 | 3.40 | 1.41 |
| 41 | 120 | 2.11 | . 70 | 56 | 28 | 2.63 | $3.36{ }^{3}$ |
|  | 232 | 2.12 | . 78 |  | 49 | 2.62 | 3.524 |
| 42 | 236 | 4.21 | $3.98{ }^{4}$ | 57 | 54 | 2.76 | 2.191 |
|  | 60 | 4.21 | 3.914 |  | 285 | 2.75 | $2.34{ }^{1}$ |
| 43 | 63 | 2.39 | . 55 | 58 | 16 | 2.99 | . 47 |
|  | 198 | 2.40 | . 23 |  | 175 | 2.94 | . 70 |

TABLE 2 (Continued)

| Number of Item Pair | Number of Item | Scale value | $t-$ value | Number of Item Pair | Number <br> of Item | Scale <br> value | $t-$ <br> value |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 59 | 41 | 2.62 | $5.47{ }^{4}$ | 66 | 209 | 3.34 | . 08 |
|  | 49 | 2.62 | $5.55{ }^{4}$ |  | 127 | 3.29 | . 16 |
| 60 | 104 | 2.89 | 1.56 | 67 | 92 | 2.77 | $5.62{ }^{4}$ |
|  | 113 | 2.90 | 1.72 |  | 285 | 2.75 | $5.86^{4}$ |
| 61 | 248 | 3.21 | 1.56 | 68 | 58 | 2.12 | $3.05^{3}$ |
|  | 129 | 3.19 | 1.17 |  | 232 | 2,12 | $3.12{ }^{3}$ |
| 62 | 175 | 2.94 | . 23 | 69 | 48 | 1.98 | 1.02 |
|  | 122 | 2.91 | . 63 |  | 98 | 1.98 | 1.17 |
| 63 | 215 | 2.30 | . 86 | 70 | 229 | 1.98 | $3.20{ }^{3}$ |
|  | 235 | 2.29 | $\therefore 78$ |  | 130 | 1.98 | $3.12{ }^{3}$ |
| 64 | 246 | 3.50 | $2.50{ }^{1}$ | 71 | 166 | 1.97 | . 70 |
|  | 255 | 3.43 | $2.66{ }^{2}$ |  | 239 | 1.98 | . 55 |
| 65 | 246 | 3.50 | 2.031 | $\therefore$ |  |  |  |
|  | 154 | 3.43 | $2.19{ }^{1}$ |  |  |  |  |

[^1]of the pairs were favorable while the remaining thirty-eight pairs were unfavorable.

There were twenty-six items which were used jointly by Form $A$ and $B$. No item on either form was repeated more than three times during the entire form with the exception of one item which was repeated five times. There were no repetitions of any pair within both forms or between the forms.

The pairs of items on Form A were matched in such a way that the discrepancies between the favorability indices for each pair were never more than nine hundredths of a point (see Table 1). The mean of the discrepancies between the favorability indices for the seventy-one pairs of items on Form A was .02, whereas the standard deviation was .015 .

The pairs of items on Form $B$ were matched in such a way that the discrepancies between the favorability indices of the item pairs were never more than nine hundredths of a point, with the exception of one pair of items in which there was a discrepancy of one tenth of a point (see Table 2). The mean of the discrepancies between the favorability indices for the seventy-one pairs of items on Form B was . 02 , whereas the standard deviation was .026.

The forced-choice format for both Forms A and B contained two statements per block. Only favorable statements appeared together in a block, and conversely only unfavorable statements appeared together in a block (Bass, 1957; Ghiselli, 1954). Each form had seventy-one pairs of statements; thirty-three were favorable, thirty-eight were unfavorable (see Tables 1 and 2).

Development of the Item Discrimination Indices

After the statements had been paired and arranged in the forced-
choice format (there were two statements per block and the order of the pairs plus the item which appeared first in each pair were determined by a table of random numbers) they were given to three hundred and two students in five introductory psychology classes, two senior psychology classes, one senior business class, and one junior education class.

These students were asked to indicate which of the two statements was most descriptive of themselves when the two statements were positive and to pick the one which was still like themselves when the two statements were negative (see Appendix A-4). Approximately half of these subjects took Form A first while the remaining half took Form B first. These three hundred and two subjects were randomly assigned to Groups $C$ and D. Group C ( $\mathrm{N}=202$ ) was used to develop the discrimination indices while Group D ( $\mathrm{N}=100$ ) was used as a hold-out group to cross-validate the scoring keys which were developed on Group C.

The usual procedure in forced-choice construction is to derive discrimination indices for each separate item. Then after the items have been arranged in the forced-choice format they are administered to a different group of subjects to obtain data for discrimination analysis of item pairs. Thus, by pairing items in the forced-choice form and running the discrimination analysis on item pairs in the first place the writer circumvented the necessity of using two different groups for discrimination analysis. Also due to the peculiarities of sample fluctuation the dichotomization of the criterion for both the analysis of single items and for the analysis of item pairs might not result in comparable groups. For example, the mean number of class cuts for the high criterion group used for analysis of single items might be significantly different from the mean number of class cuts for the high criterion group used for
analysis of item pairs, even though the percentage of high "class-cutters" is the same in each group.

The subjects in Groups C and D were assured that their instructors would not see their papers and they were asked to give only their sex and classification. Each student in Group C and D was also asked to give a self-report on his perceived number of class cuts. Whenever self-reports concerning class cuts were required, the self-report form was attached by means of a staple to the other material which was used at that time. Thus, for each individual it was possible to identify both his self-report form and any other material which was gathered at that time. The instructions to the subjects which were read aloud were printed on the self-report form (see Appendix A-3).

These self-reports (Group C) were the basis of determining high and low "class-cutters." The self-reports (Group C) were ranked in order by the total number of perceived class cuts; the top and bottom 30.5 per cent of this distribution was defined as the high and low criterion groups respectively. It was felt by the writer of this paper that this procedure (of using self-reports as the criterion) would give a less contaminated and more reliable criterion of the behavior of class cutting than would be obtained by using official class absentee reports. The reason for this decision was that some of the absences which were assessed to a student might be legitimate, however, for reasons of his own the student may not make this fact known to the instructor.

Sub-Group 1 C comprised the top 30.5 per cent of the students from Group C who were classified as high "class-cutters" while Sub-Group 2 C comprised the bottom 30.5 per cent of the subjects from Group C who were classified as low "class-cutters." The mean number of class cuts for
subjects in Sub-Group 1 C was 18.70 while the mean number of class cuts for subjects in Sub-Group 2 C was 1.77 .

For both forms the percentage of subjects in the high absence group who checked an item was compared to the percentage of students in the low absence group who checked an item to see if the item discriminated significantly between the two groups. The Lawshe-Baker nomograph (1950) was used to obtain the item statistic, Omega, for each item on both forms. This statistic was then used to compute the t-values for each item. No item was used in the final forms unless it was significant at the five per cent level of significance or beyond (see Tables 1 and 2). Each statement which discriminated significantly at or beyond the five per cent level was weighted in accordance with its significance. That is, the weight that each item contributed to the total score increased as the validity of the item increased. The numerical values ( 1 to 6) used to weight the items were arbitrarily chosen (see Table 3). The writer realizes that the validity of the final scales may be decreased by use of this arbitrary scoring system. However, in connection with the use of item validities for the selection and weighting of items, Thorndike states:

These procedures have probably never been given an adequate empirical trial, so that it is not possible to estimate how much improvement in validity the more refined procedures may be expected to add to rough, intuitive procedures of item selection (Thorndike, 1949, p. 252).

Item Weights

In both forms the degree of discrimination was kept as nearly equal as possible. This was accomplished by the following procedure. When one item pair of a certain validity was placed on the final form of Form $B$
another item pair which was placed on the final form of Form $A$ was picked so that its validity matched as nearly as possible the validity of the item pair which was placed on Form B. The result of this procedure is described more fully in the next section.

It was necessary to keep the degree of discrimination as equal as possible in order to insure that the two forms were parallel or compara~ ble in this factor. If this point was ignored it would not have been possible to partial out the effects of the methods used in obtaining the favorability index.

Since it was desired to have a high score on the forms identified with a high "class-cutter" the items which discriminated in the direction of the high "class-cutter" carried relatively large weights while items which discriminated in the direction of the low "class-cutter" were assigned small weights. Table 3 presents the arbitrary scoring system which was used to develop the scoring keys for both Form $A$ and Form B.

TABLE 3

SCORING SYSTEM WHICH WAS USED TO DEVELOP THE SCORING KEYS FOR BOTH FORM A AND FORM B

| Significance Level of the Item | Item Weights |  |
| :---: | :---: | :---: |
|  | High | Low |
|  | Cut Group | Cut Group |
| . 001 | 6 | 1 |
| . 005 | 5 | 2 |
| . 01 | 5 | 2 |
| . 05 | 4 | 3 |

Since there was only a total of three items which were significant at the .01 level of significance used on each form the writer felt justi-
fied in combining the .01 and the .005 significance levels. Thus, the writer assigned the same arbitrary weight to both of these levels. This procedure helped reduce the total possible score on each of the forms thereby reducing the computational labor.

Selection of Item Pairs for the Final Forms

The number of pairs of items on the final forms were limited by the fact that only seventy-two items reached an adequate significance level on Form B, although there were one hundred and ten significant items on Form A. Thus, the final form of Form A had thirty-six pairs of items; forty-eight items were significant at the .001 level of significance or beyond; nine items were significant at the . 005 level of significance; three items were significant at the .01 level of significance, and twelve items were significant at the .05 level of significance. There was a maximum possible score of one hundred and ninety-six and a minimum possible score of fifty-two (see Tables 2 and 4).

The final form of Form B had thirty-six pairs of items; forty-seven items were significant at the . 001 level of significance or beyond ten items were significant at the .005 level of significance; three items were significant at the .01 level of significance, and twelve items were significant at the .05 level of significance. There was a maximum possible score of one hundred and ninety-four and a minimum possible score of forty-eight (see Tables 3 and 5).

As can be seen, it was possible to match the forms very closely in terms of item discrimination levels.

To test the hypotheses of the relative transparency of the two final forms, thirty-nine subjects (Group E) were asked to take final forms of
both Forms $A$ and $B$ under directions which instructed them to try to give the best possible impression of themselves (see Appendix A-6). In other words, they were instructed to try to falsify the forms in such a way that the probability of their being accepted for admittance into college would be increased. This group (Group E) was also asked to complete the forms under "honest" or normal conditions before they tried to falsify the forms (see Appendix A-5). Approximately one-half of the subjects (Group E) completed Form A first for both conditions while the remaining subjects were given Form B first for both conditions. Subjects were as signed to these conditions randomly.

The two forms presented to subjects instructed to take the forms honestly and then to "beat" the forms were the same as the experimental forms except that instructions appropriate for the "beat" conditions were substituted when the subjects were required to falsify their answers (see Appendix A-6). Also, minor changes were made on the honest instructions because of some procedural changes (see Appendix A-5). A staple was placed in each booklet so that the subjects could not see the instructions for the last half of the booklet until they had completed the first task and were instructed to proceed with the second.

Besides the preliminary analysis of the statements on the two forms, the reliability and validity of each form was determined on a hold-out sample. The reliability of each of the forms was obtained by correlating each subject's score on the odd pairs of items with his score on the even pairs of items. Then, by use of the Spearman-Brown technique, the step-ped-up reliabilities of the forms were calculated. The validity coefficient for each form was obtained by correlating each subject's total number of perceived class cuts with his total score on each of the forms.

TABLE 4
FINAL FORM ON FORM A EXCEPT THAT THE ITEM NUMBERS
WERE SUBSTITUTED FOR THE LETTERS A AND B

| Number of Item Pair | Number of Item | Item |
| :---: | :---: | :---: |
| 1 | 197 | I become disturbed when I do badly on an exam and I try twice as hard on the next one. |
| . | . 85 | I go to class because $I$ have an intense desire to learn and to be a better person in my field. |
| 2 | 173 | I find it very difficult to attend class when it is raining and cold outside; the bed looks much better than a long walk to class. |
| " | 78 | I go to class because I gain social approval for doing so. |
| 3 | 268 | I attend class if I have too many cuts because I'm afraid of flunking. |
|  | 87 | I attend class now a whole lot more regularly than I did in high school. |
| 4 | 1 | I attend class because the instructor may clarify my misunderstandings. |
|  | 191 | I make a special effort to attend class for a review period. |
| 5 | 212 | I usually cut only when special events come up, |
|  | 277 | When I'm bored with my schedule I find that by missing certain classes my life is more enjoyable: |
| 6 | 128 | I go to class because I'm very rule conscious and fear the consequences of missing class. |
|  | 268 | I attend class if I have too many cuts because I'm afraid of flunking. |
| 7 | 59 | I go to class to keep current and to take part in the good discussions. |
|  | 106 | I like all of my classes and attend them regularly. |

TABLE 4 (Continued)

| Number of Item Pair | Number of Item | Item |
| :---: | :---: | :---: |
| 8 | 100 | When I cut class and feel unprepared, I go to a classmate for help in getting the lesson I missed. |
|  | 18 | I attend class because I've always had the need to be the best in everything I attempt. |
| 9 | 173 | I find it very difficult to attend class when it is raining and cold outside; the bed looks much better than a long walk to class. |
|  | 212 | I usually cut only when special events come up. |
| 10 | 26 | If most of the material on the test is from lecture alone $I$ attend class out of necessity. |
|  | 250 | If I'm late to a class I will go on rather than miss class completely. |
| 11 | 105 | I attend class because I find the instructor's advise and encouragement helpful. |
|  | 89 | I go to class to obtain lecture notes which I use in preparing for a test. |
| 12 | 146 | I attend those classes in which I would be graded down for cutting. |
|  | 76 | I attend class because I'm a dedicated scholar and don't want to miss a thing. |
| 13 | 128 | I go to class because I'm very rule conscious and fear the consequences of missing class. |
|  | 100 | When I cut class and feel unprepared, I go to a classmate for help in getting the lesson I missed. |
| 14 | 212 | I usually cut only when special events come up. |
|  | 88 | I attend class now a lot less than I did in high school. |
| 15 | 134 | When I don't do well on the first and second exam I do not give in but fight that much harder. |

TABLE 4 (Continued)

| Number of Item Pair | Number of Item | Item |
| :---: | :---: | :---: |
|  | 37 | I maintain almost a perfect attendance record. |
| 16 | 15 | To reduce boredom in an easy class I spend little time on it--but I still go to the lecture. |
|  | 73 | Sometimes I would like to go to class but find that I am too lazy to make the effort. |
| 17 | 148 | When each student is reciting in class I cut until it is my turn. |
|  | 211 | I go to class for no other reason than I'm just in the habit of going. |
| 18 | 21 | I go to class because I don't like to spend time hunting down someone else to get the day's notes. |
|  | 171 | I started to skip one class to prepare for the other and this soon became an established routine. |
| 19 | 38 | When $I$ have an 8:00 a.m. class and my roomate doesn't $I$ cut that class more of ten and sleep too. |
|  | 245 | I attend class because of the goodlooking boy or girl sitting next to me. |
| 20 | 271 | I cut my classes and can be classified as a campus playboy or girl. |
|  | 262 | I'm strictly for myself and do not care about rules of society--this includes class attendance. |
| 21 | 126 | I cut class because the instructor tries to force me to attend. |
|  | 15 | To reduce boredom in an easy class I spend little time on it--but I still go to the lecture. |
| 22 | 108 | When an instructor thinks poorly of me for any reason I cut his' class frequently. |
|  | 12 | I, attend class because I'm short on money and can't afford to flunk. |
| 23 | 7 | I go to class because I like to conform with the majority of students. |

## TABLE 4 (Continued)

| Number of Item Rair | Number of Item | Item |
| :---: | :---: | :---: |
|  | 23 | I cut class right after a test because the next one is a long way off. |
| 24 | 245 | I attend class because of the goodlooking boy or girl sitting next to me. |
|  | 5 | I cut classes because I do not enjoy them. |
| 25 | 154 | I do not cut class because I'm afraid of the instructor's wrath. |
|  | 277 | When I'm bored with my schedule I find that by missing certain classes my life is more enjoyable. |
| 26 | 43 | When I do poorly on the first test after studying a great deal I just give up. |
|  | 233 | I skip classes and can see nothing wrong in it. |
| 27 | 21 | I go to class because I don't like to spend time hunting down someone else to get the day's notes. |
|  | 220 | I cut class because I can cram at the last minute and make-up for it. |
| 28 | 260 | As the class periods increase I cut more and more. |
|  | 7 | I go to class because I like to conform with the majority of students. |
| 29 | 88 | I attend class now a lot less than I did in high school. |
|  | 141 | I attend class because to me it is a crutch, a helping hand, for $I$ don't read the text very often |
| 30 | 236 | I like class and academic life a lot better than the extracurricular activities. |
|  | 23 | I cut class right after a test because the next one is a long way off. |
| 31 | 236 | I like class and the academic life a lot better than the extracurricular activities. |

## TABLE 4 (Continued)

| Number of Item Pair | Number of Item | Item |
| :---: | :---: | :---: |
|  | 254 | Having cut a class I hate to go back either because of embarrassment or a surprise pop-quiz. |
| 32 | 38 | When I have an 8:00 a,m. class and my roommate doesn't $I$ cut that class more often and sleep too. |
|  | 154 | I do not cut class because I'm afraid of the instructor's wrath. |
| 33 | 224 | I cut some of my classes more than others. |
|  | 249 | If my grade is not good in a particular class I will cut another to prepare for it. |
| 34 | 209 | I attend class because the group I run with goes to class. |
|  | 254 | Having cut a class I hate to go back either because of embarrassment or a surprise pop-quiz. |
| 35 | 12 | I attend class because I'm short on money and can't afford to flunk. |
|  | 266 | I cut class when the instructor has a habit of relating his personal experiences. |
| 36 | 38 | When I have an 8:00 a.m. class and my roommate doesn't I cut that class more often and sleep too. |
|  | 7 | I go to class because I like to conform with the majority of students. |

TABLE 5

## FINAL FORM OF FORM B EXCEPT THAT THE ITEM NUMBERS <br> WERE SUBSTITUTED FOR THE LETTERS A AND B

| Number of Item Pair | Number of Item | Item |
| :---: | :---: | :---: |
| 1 | 286 | I have such a drive to achieve that I will attend class even though I'm sick, sleepy, tired or even depressed. |
|  | 146 | I attend those classes in which I would be graded down for cutting. |
| 2 | 191 | I make a special effort to attend class for a review period. |
|  | 37 | I maintain almost a perfect attendance record. |
| 3 | 268 | I attend class if I have too many cuts because I'm afraid of flunking. |
|  | 264 | I attend class because I feel the instructor knows if I'm absent no matter how large the class. |
| 4 | 259 | By attending all classes I may impress the instructor which may result in a higher grade. |
|  | 101 | I attend class more regularly right before an exam. |
| 5 | 101 | I attend class more regularly right before an exam. |
|  | 65 | I cut only one or two times a semester because any more will hurt my grade. |
| 6 | 17 | I have never cut one class to study for another. |
|  | 163 | I attend every class because some of what I'm expected to know is bound to soak through. |
| 7 | 117 | I attend class to straighten out things by asking questions. |
|  | 26 | If most of the material on the test is from lecture alone $I$ attend class out of necessity. |
| 8 | 101 | I attend class more regularly right before an exam. |

TABLE 5 (Continued)

| Number of <br> Item PairNumber of <br> Item |
| :---: |
| 92 |

## TABLE 5 (Continued)



## TABLE 5 (Continued)

| Number of Item Pair | Number of Item | Item |
| :---: | :---: | :---: |
| 24 | 82 | I find lectures interesting and go everytime to learn as much as I can. |
|  | 200 | I enjoy going to class and never feel any embar* rassment there. |
| 25 | 95 | I attend class because I'm a timid student and I'm afraid to miss. |
|  | 209 | I attend class because the group I run with goes to class. |
| 26 | 236 | I like class and academic life a lot better than the extracurricular activities. |
|  | 60 | In the spring I find it very easy to cut my afternoon classes. |
| 27 | 95 | I attend class because I'm a timid student and I'm afraid to miss. |
|  | 241 | The main reason $I$ cut class sometimes is because I am just too sleepy to get up or too tired to go. |
| 28 | 80 | I often cut class and then think of a reasonable sounding excuse to give to the instructor. |
|  | 63 | I sometimes cut my class to have a coke date with a particular person. |
| 29 | 28 | I cut class because I don't like the atmosphere of the classroom itself. |
|  | 49 | I attend class because everyone else is there and I have nothing to do. |
| 30 | 54 | When I can pass without going to class $I$ cut it because it leaves more time for other classes. |
|  | 285 | I attend class because I like to show-off my knowledge. |
| 31 | 41 | I cut class now even though I know I might be sorry for it later on. |
|  | 49 | I attend class because everyone else is there and |

TABLE 5 (Continued)

| Number of Item Pair | ber Item | Item |
| :---: | :---: | :---: |
|  |  | I have nothing to do. |
| 32 | 246 | I always evaluate how important attendance and the lectures are in my various courses to find which ones I can cut and still keep a good grade. |
|  | 255 | Sometimes but very seldom I cut class to break the boredom of my routine. |
| 33 | 246 | I always evaluate how important attendance and the lectures are in my various courses to find which ones I can cut and still keep a good grade. |
|  | 154 | I do not cut class because I'm afraid of the instructor's wrath. |
| 34 | 92 | I cut class when the instructor is lecturing over an easy topic. |
|  | 285 | I attend class because I like to show-off my know1edge. |
| 35 | 58 | I always weigh the situation to decide what I want to do--quite often class loses. |
|  | 232 | I cut class often because $I$ have a hobby I'd rather work on than go to class. |
| 36 | 229 | I cut class because others do it. |
|  | 130 | I didn't intend being a-high class-cutter, but it's like opium and I soon became addicted to it. |

III. THE EVALUATION OF THE FORCED-CHOICE INSTRUMENTS

## Cross-Validation of the Instruments

An instrument is valid for the purpose of predicting a particular criterion only to the extent that scores on the instruments are related to the criterion. In order to assess the validity of Form $A$ the data from the hold-out sample was used for cross-validation. The validity coefficient (Pearson $r$ ) which was run between each student's total score on Form A and the total number of times that he cut his classes was .694; the standard error was .051. This value was significant beyond the . 01 level of significance. Likewise, in order to assess the validity of Form B the data from the hold-out sample was used for cross-validation. The validity coefficient (Pearson $r$ ) which was run between each student's total score on Form $B$ and the total number of times that he cut his classes was .699; the standard error was .050. This value was also significant beyond the . 01 level of significance.

One of the purposes of this study was to determine whether or not it was possible to construct forced-choice instruments which would measure attitudes toward absenteeism in a college situation. The results of the above analysis has verified that it was possible to develop such instruments with adequate validity. In fact, the obtained validity for the two forms was very high for instruments of this type.

The writer mentioned earlier in this study that the two forms (A and B) would have to be matched as equally as possible for item discrimina-
tions. Thus, a test of the difference between the validity coefficients of Form A and Form B was run. This test resulted in a t-value of . 142 which was not significant at the .05 level of significance. Because the sampling distribution of $r$ contains numerous departures from the normal distribution the validity coefficients were transformed into Fisher's $Z$ coefficients before this test was made. Since no significant difference was found between the two validity coefficients, it may be concluded that the matching procedure used resulted in forms which were comparable on this factor.

Both of the forced-choice instruments developed in this study might be useful to college counseling services in helping the counselor pick out those students who have a tendency to miss a large part of their classes thereby reducing their chances for success in a college environment. However, the college counselor in using these instruments must use caution in his interpretations until the forced-choice forms are proven to be valid in his own particular setting. Also since both of the forms proved to be transparent the counselor should take this fact into account when he is interpreting a subject's score for if the subject had falsified his response his true score would be much higher.

## Reliability of the Instruments

The reliability of an instrument refers to the extent to which the results of the instrument are verifiable. An ideal measuring instrument would give the same results every time it was used. Sometimes, this idea1 is approached, but, never completely attained.

Instead of determining the reliability of the instruments by use of the test-retest technique, the split-half technique was used to determine
the reliability of both forms. This was accomplished by correlating each subject's score on the odd pairs of items with his score on the even pairs of items. The stepped-up correlation for each of the forms was then computed by the use of the Spearman-Brown technique. The formula used for this purpose was Garrett's (1954) formula 79. The reason that the test-retest technique was not used is that it would be necessary to require the subjects to identify themselves. Since honest responses were desired from the subjects the writer felt that the students' responses might be biased if their identities were not kept anonymous.

The split-half reliability for Form A was .852 , which became .918 when the Spearman-Brown formula was applied. The standard error of the stepped-up correlation was .015 . The data from the hold-out sample were used to determine the split-half reliability for Form $A$. Likewise, the data from the hold-out sample were used to determine the split-half reliability for Form B. The split-half reliability for Form B was . 807 which became . 895 when the Spearman-Brown formula was applied. The standard error of the stepped-up correlation was .019 .

The split-half reliability of each form was quite high for instruments of this type. Form $A$ had a higher reliability than Form B, however, when a test of this difference was run it was found that the two forms did not differ significantly for a t-value of .642 was obtained between the two correlation coefficients for Form A and Form B. The correlation coefficients were transformed to Fisher's $Z$ coefficients before this test was made. The results of this test shows that the reliability of the two forms was comparable. That is, one cannot infer from the statistical data that one form was more reliable than the other. Since the standard deviation of Form $A$ was slightly less than the
standard deviation of Form B there might be a small advantage of using Form A instead of Form B whenever it is possible.

## Normative Data Developed on Group D

Form Group D the mean number of class cuts was 8.46 . The standard deviation was 7.82. The standard error of the mean was . 782 and the standard error of the standard deviation was 1.10.

On Form A the mean score for Group D was 117.08 . The standard deviation was 28.48 . The standard error of the mean was 2.84 and the standard error of the standard deviation was 2.02 .

On Form B. the mean score for Group D was 131.12. The standard deviation was 30.34 . The standard error of the mean was 3.03 and the standard error of the standard deviation was 2.15.

A $t$-value of 3.16 was obtained when a test of the difference between the mean scores for Group D on Form A and Form B was run. This t-value was significant at the .005 level of significance. This difference could be due to the fact that it was possible to make a score that was lower by six points on Form A than it was on Form B. Or it may be that the students were more willing to choose the statement which discriminated in the direction of the high "class-cutter" more often on Form B than on Form A. If this was the case, it would indicate that the two different procedures used in developing the favorability indices for the forms were responsible for this difference. However, the writer thinks that the difference between means was due to the fact that it was possible to make a lower score on Form A than on Form B.

## Transparency of the Instruments

The data used to test the forms for transparency were obtained by
requiring each subject in Group E to complete the forms under supposedly honest conditions and then to re-take the forms under dishonest conditions.

An $r$ of .064 was obtained for Form A when each subject's total score on honest conditions was correlated with his total score on dishonest conditions; the $\mathrm{SE}_{\mathrm{r}}$ was .164 . This correlation coefficient was non-significant at the .05 level of significance. This very low and non-significant $r$ indicates that there was no consistent change in the subject's position for the two conditions. A t-test run between the mean score under dishonest conditions and the mean score for honest conditions resulted in a t-value of 7.06 which was significant at the . 001 level of significance. This indicates that the subjects were able to change their responses to the statements. Since the mean for the dishonest conditions was lower than the mean for the honest conditions, the writer concluded that students could effectively fake their responses to Form A.

An r of .320 was obtained from Form $B$ when each subject's total score obtained under honest instructions was correlated with his total score obtained under dishonest instructions; the $\mathrm{SE}_{\mathrm{r}}$ was. 164 . For 37 degrees of freedom a correlation coefficient of .317 is required for significance at the .05 level of significance. The above correlation was just barely significant at the five per cent level of significance. Evien though a significant relationship was obtained it was very low and indicates that the change in the subject's position on the two conditions was not very consistent. A t-test run between the mean score under dishonest conditions and the mean score for honest conditions resulted in a t-value of 6.61 which was significant at the . 001 level of significance.

This indicates that the subjects were able to change their responses to the statements. Since the mean for the dishonest conditions was lower than the mean for the honest conditions, the writer concluded that students could effectively fake their responses to Form B.

A t-value of 1.08 was obtained when a test of the difference between the two correlation coefficients for Form A and Form B which were obtained under honest and dishonest conditions was run. This $t$-value was nonsignificant at the .05 level of significance. The correlation coefficients were transformed into Fisher's Z coefficients before this test was run. Since there was no significant difference between the two correlation coefficients for Form $A$ and Form B which were obtained under honest and dishonest conditions the writer concluded that both forms were comparable in the number and types of position changes between honest and dishonest conditions.

The mean score for Form A under honest instructions (Group E) was 110.61; the standard deviation was 32.14 and the range was 63 to 195 . The mean score on Form $A$ under dishonest instructions (Group E) was 72.15 ; the standard deviation was 9.40 and the range was 58 to 93.

The mean score on Form B under honest instructions (Group:E) was 126.56; the standard deviation was 32.97 and the range was 68 to 188. The mean score on Form B under dishonest instructions (Group E) was 87.05; the standard deviation was 16.32 and the range was 59 to 117 .

It is interesting to note that not only do the means decrease when subjects are instructed to respond dishonestly but the standard deviations also drop radically. The difference between the standard deviation obtained under honest conditions and the standard deviation obtained under dishonest conditions for each form was significant at the . 001
level of significance. The t-value for Form A was 5.97 and the $t$-value for Form B was 3.98. This indicates that the dishonest instructions played a fairly good role in commicating a uniform set. That is, since there was much more variation among subjects under honest conditions than the variation among the same subjects under dishonest conditions it seems reasonable to assume that the large variation obtained under honest conditions reflects "true" variance. When the subjects were instructed to score alike on the instruments (dishonest conditions) the "true" variance was lost.

Since it was possible to obtain a difference score (honest minus dishonest conditions) for each subject a significance test was also run on these difference scores. When subjects can be paired off it is possible to obtain the desired statistics directly from difference between pairs. That is, one does not need to know the standard errors of the two means or the amount of correlation present for this procedure (the difference method) takes these things into account. In this connection Guilford states:

The interpretations and conclusions concerning the mean difference are the same as usual. This more direct method is very strongly recomended whenever it can conveniently be applied (Guilford, 1950, p. 221).

Difference scores (Group E) for Form A were obtained by subtracting each subject's total score obtained under dishonest conditions from his total score which was obtained under honest conditions. A t-value of 7.817 was obtained from a t-test which was run on the difference scores. This t-value was significant beyond the . 001 level of significance. Difference scores (Group E) for Form B were obtained by subtracting each subject's total score obtained under dishonest conditions from his total score which was obtained under honest conditions. A t-value of
8.283 was obtained from a t-test which was run on the difference scores. This t-value was significant beyond the .001 level of significance.

The significance tests on the difference scores for each form revealed that there was a very significant difference between the mean score for honest conditions and the mean score for dishonest conditions. This indicates that the subjects were able to change their responses to the statements when instructed to do so. Since the mean for the honest conditions was much higher than the mean for the dishonest conditions for both forms, the writer concluded as before, that students could effectively fake their responses to Form A and to Form B.

Since no correlation was found between total scores on honest and dishonest conditions for Form A, a t-test for uncorrelated means gave a value of 7.06 which was still significant at the .001 level of significance.

The mean difference score for Form A (Group E) was 40.15 and the standard deviation was 30.75 . The mean difference score for Form B (Group: E) was 40.95 and the standard deviation was 29.83.

When difference scores were computed, a total of six reversals was found; three reversals for each form. A reversal was obtained when a subject made a higher score when instructed to respond to the statements dishonestly than he made when he was instructed to respond to the statements honestly. However, no subject had a reversal on both Form $A$ and Form B. For two of the reversals the discrepancy was very small and probably can be accounted for by chance. But, the remaining four reversals (no reversal was over 17 points) are very hard to interpret and the writer has no ready explanation for this behavior unless for some reason the students were not responding to the statements in accordance with the in-
structions.

An $r$ of .82 was obtained when a correlation was run between the difference scores on Form A and Form B. This was accomplished by pairing each individual's difference score on Form A with his difference score on Form B. Also, a t-value of .254 was obtained when a t-test (for correlated means) was run between the mean difference score on Form $A$ and the mean difference score on Form B. This t-value is not significant at the .05 level of significance. This showed that there was no significant difference between Form $A$ and Form. B in the extent to which they could be faked. That is, they were both transparent to the same degree. Thus, the writer concluded that there was no difference in the transparency between the two different forced-choice forms developed in this paper.

A very high relationship $(r=: 82)$ was obtained when a correlation was run between the difference scores. This finding helps support the conclusion in the above paragraph.

Since both of the forms developed in this study can be faked (a finding which is not uncommon, Dunnette, McCartney, Carlson, \& Kirchner, 1962) one should use caution in interpreting the score for any subject who is suspected of cheating for his "true" performance score on either of the instruments may be much higher.

Since both of the forms proved to be equally transparent, in spite of the scaling methods used to match the items in favorableness; it seems that a rather simple method in arriving at favorability indices would be adequate. It might be that subjects respond to attitude statements on more dimensions than just the dimension of favorableness of the items when they are asked to give fake responses. This would indicate that items might be less transparent if they were matched on other dimensions
than just favorableness. That is, if the statements are matched on favorableness the subjects cannot respond differentially to the statements on this dimension but they still may be able to fake their responses by responding to other differences between the statements, such as, the practicality or clarity of the statements. A study by Morrison and Maher (1958) helps support this conclusion. They ran a factor analysis on the correlation matrix of twelve appearance indices (matching indices) which resulted in five factors, one of these being a general factor (social desirability) which took up sixty per cent of the total variance; the rest of the variance was distributed among the remaining four factors. However, it might not be possible to match the items on all of the five factors (dimensions) finely enough to help prevent transparency. Even if one is lucky and manages to match items on three dimensions there is still some doubt as to whether or not the subject could falsify his responses by responding to the remaining unmatched dimensions.

It is the writer's opinion that when matching items, transparency is built into the pairs when one item is picked because it is descriptive of a person who is high in some factor whereas the other item is chosen because it is descriptive of a person who is low in some factor. In other words, it may be that statements which come from a description of ! a low "class-cutter" may be different in the general mood set by the wording of the statement, or in the generality or clarity of the statement, than statements which come from descriptions of a high."class-cutter." Thus, two statements may be taken from a description of a. low "classcutter" and still be differential in their discrimination, whereas the general mood, etc. of both statements may be approximately the same.

The writer thinks that transparency might be reduced if items were matched only on favorability and then tried out empirically to determine which pairs of items were valid. However, it might prove more useful to develop correction factors to reduce a subject's cheating on all types of personality and attitudinal exams, including the forced-choice type.

Since class attendance is related to performance in class (Anikeff, 1954) and is also probably related to general adjustment to the college situation, the forced-choice forms developed in this study might prove very useful to college counseling services in the diagnosis and guidance of college students.

## IV. SUMMARY AND CONCLUSIONS

The study which has been reported was concerned with the construction of two forced-choice instruments (Form A and Form B) measuring attitudes toward absenteeism in a college population and the relative degree of transparency between the two forms.

Each of the instruments was validated (concurrent validity) by obtaining self-reports from each subject (Group D) concerning his perceived number of class cuts during the previous semester and correlating his perceived number of class cuts with his total score on each of the forms.

The reliability of each of the forms was obtained by correlating each subject's score on the odd pairs of items with his score on the even pairs of items. Then, by use of the Spearman-Brown technique, the stepped-up reliabilities of the forms were calculated.

The transparency of the two forms (the favorability indices of one form, Form A, were developed by the method of successive intervals, while the median was employed to develop the favorability indices for Form B) was determined by requiring each subject in Group E to complete the forms under supposedly honest conditions and then to re-take the forms under dishonest conditions.

Difference scores for both forms were obtained by subtracting each subject's total score under dishonest conditions from his total score under honest conditions.

A significance test was run on the mean difference score for Form A
to determine if Form $A$ could be falsified when subjects were instructed to make the best possible score. Likewise, a parallel test was run on the mean difference score for Form B to determine if it could be falsified.

To test the relative transparency between the two forms a significance test was run between the mean difference score on Form $A$ and the mean difference score on Form B.

Conclusions

The research demonstrated that it was possible to construct forcedchoice instruments with adequate validity and reliability. The validity for Form A was . 694 and its reliability was .918 , whereas the validity for Form B was . 699 and its reliability was .895 . Both of the above validity coefficients are significant beyond the .01 level of significance whereas it is self-evident that the reliability of both forms is very adequate.

The null hypotheses tested in this study were:

1. There is no significant difference in transparency between the two different forced-choice forms developed in this paper. The favorability indices of one form (Form A) were derived by the scaling method of successive intervals, whereas the other form (Form B) employed the median to obtain its favorability indices.
2. There is no significant difference on Form A between subjects who are instructed to answer the form truthfully (honest condition) and subjects instructed to falsify the form in such a way that they would make the best possible score (beat condition).
3. There is no significant difference on Form B between subjects
who are instructed to answer the form truthfully (honest condition) and subjects instructed to falsify the form in such a way that they would make the best possible score (beat condition).

Hypothesis number one which stated that there is no significant difference in transparency between the two forms could not be rejected because a t-test between the mean difference score for Form $A$ and the mean difference score for Form $B$ was not significant at the .05 level of significance. Thus, the writer concluded that the transparency of Form $A$ and Form B was approximately equal. This indicates that a rather simple scaling procedure is as effective as a rather complex scaling procedure in gaining indices of favorability. Thus, considerable time and effort may be saved by the use of the simple scaling procedure.

Hypothesis number two which stated that Form A could not be faked was rejected because a t-test on the mean difference score was significant beyond the . 001 level of significance. Thus, it was concluded that Form A could be falsified.

Hypothesis number three which stated that Form B could not be faked was rejected because a t-test on the mean difference score was significant beyond the . 001 level of significance. Thus, it was concluded that Form B could be falsified.

## BI BLIOGRAPHY

Anikeef, A. M. Relationship between class absences and college grades. J. Ed. Psychol., 1954, 45, 244-249.

Baier, D.E. Reply to Travers' "Critical review of the validity and rationale of the forced-choice technique:" Psych. Bull., 1951, 48, 421-434.

Barislow, B. The Edwards Personal Preference Schedule and fakability. J. app1. Psychol., 1958, 42, 22-27.

Bass, B. M. Faking by sales applicants of a forced-choice personality inventory. J. app1. Psychol., 1957, 41, 403-404.

Berkshire, J. R., \& Highland, R. W. Forced-choice performance ratings. A methodological study. Personne1 Psychol., 1953, 6, 355-378.

Brayfield, A. H., \& Crockett, W. H. Employee attitudes and employee performance. Psych. Bu11., 1955, 52, 396-424.

Dunnette, M. D., McCartney, J., Carlson, H. C., \& Kirchner, W. K. A study of faking behavior on a forced-choice self-description checklist. Personnel Psychol., 1962, 15, 13-24.

Edwards, A. L. The social desirability variable in personality assessment and research. The Dryden Press, 1957.

Edwards, A. L. The techniques of attitude scale construction. Appleton-Century-Crafts, Inc., New York, 1957.

Garrett, H.E. Statistics in psychology and education., (4th ed.), Longmans, Green and Co., New York, 1954.

Ghiselli, E.E. The forced-choice technique in self-description. Personne1 Psychol., 1954, 7, 201-208.

Gilson, T. Q. Some significant projects in recent management research. Personne1, 1958, 35 (N 2), 43-49.

Guilford, J. P. Fundamental statistics in psychology and education. (2nd ed.), McGraw-Hi11, New York, 1950.

Herzberg, F., Mausner, B., \& Snyderman, B. The motivation to work. Wiley, New York, 1959.

Jackson, J. H. Factors involved in absenteeism. Personnel J., 1944, 22, 289-295.

Jurgensen; C.E. A nomograph for rapid determination of medians. Psychometrika, 1943, 8, 265-269.

Kahn, R. L., \& Katz, D. Leadership practices in relation to productivity and morale, In D. Cartright \& A. Zander (ed.) Group Dynamics. Row Peterson, Evanston, Il1., 1953, 612-627.

Lawshe, C. H. \& Baker, P. C. Three aids in the evaluation of the significance of the difference between percentages. Educ. psychol. Measmt., 1950, 10, 263-270.

Longstaff, H. P., \& Jurgensen, C. E. Fakability of the Jurgensen Classification Inventory. J. appl. Psychol., 1953; 37, 86-88.

Lotz, J. F. Problem of student absences. Peabody J. Ed., 1954, 31, 291-295.

Maher, H. Studies of transparency in forced-choice scales: I. Evidence of transparency. J. appl. Psychol., 1959, 43, 275-278.

Meeh1, P.E., \& Hathaway, S. R. The $K$ factor as a suppressor variable in the Minnesota Multiphasic Personality Inventory. J. appl. Psychol., 1946, 30, 525-564.

Morrison, R. R., \& Maher, H. Matching indices of use in forced-choice scale construction. J. app1. Psycho1., 1958, 42, 399-403.

Naylor, J. C., \& Vincent, N. D. Predicting female absenteeism. Personnel Psychol., 1959, 12, 81-84.

New York Personne1 Management Association. What 141 companies do about absenteeism. Personnel J., 1950, 29, 142-152.

Sessions, E.D. Forced-choice--the new army rating. Personnel Psychol., 1948, 1, 365-381.

Snedecor, G. W. Statistical methods (5th ed.), The Collegiate Press, Inc., Ames, Iowa, 1956.

Thorndike, R. L. Personnel Selection. John Wiley and Sons, Inc., New York, 1949.

Wesman, A. G. Faking personality test scores in a simulated employment situation. J. appl. Psychol., 1952, 35, 112-113.

Wherry, R.J. An evaluation and diagnostic forced-choice rating scale for servicemen. Personne1 Psycho1., 1959, 12, 227-236.

APPENDIX A

## APPENDIX : A-1

## INSTRUCTIONS USED IN OBTAINING PROJECTED ESSAYS CONCERNING CLASS CUTTING

Class cutting like class attendance is not uncommon on a college campus. Undoubtedly the reasons for attending and cutting classes are very numerous. Very little is known about a student's reasons and his feelings about cutting and attending his classes.

You are to write an essay in which you will describe both a person who is a high class-cutter and one who is a low class-cutter.

In writing your essay consider the reasons and feelings which you think are responsible for a person being either a high or a low classcutter. You may think of your essay as being titled: "The reasons and feelings behind the actions of a high and a low class-cutter."

Write your essays in this booklet; use the reverse side of the booklet only if additional space is needed.

I am not interested in an acceptable English theme. What I'm looking for are the reasons and feelings which you think are operating to cause a person to be either a high or a low class-cutter. So if it happens that you can't spell a word--go ahead and use it for $I$ am the only person who will see your essay and $I$ am not interested in your ability as a speller.

Please write about the high class-cutter first.

After answering the two questions which appear below begin your essay. Do not sign your name.

Please Check: Sex: M/F Class: Fr/ Soph/ Jr/ Sr/ Grad
Begin your essay with the high class-cutter on the next page:

## APPENDIX A-2

INSTRUCTIONS USED IN OBTAINING JUDGMENTS OF THE FAVORABLENESS OF THE STATEMENTS

Please Check: Sex: M/F Class: Fr/Soph/Jr/Sr/Grad
Below you will find an example of a statement concerning cutting and attending classes. Underneath the statement is a line with seven equal divisions. These divisions represent different degrees of desirability or undesirability of the statement as it appears in others, as indicated by the adjectives at the top of the line. A judge, like yourself, has made an estimate of the degree of desirability or undesirability of this statement when it is applied to college students by placing an $X$ in one of the divisions.

Example: I truly enjoy school and go to all my classes everyday.

| Undesirable |
| :---: |
| extremely / strongly / moderately / neutral $/$ / moderately/ strongly / extremely |

The person who judged this statement believed that it was desirable in other college students and indicated the degree of desirability which he felt it had by placing an $\underline{X}$ in the appropriate division. You will note that this person believed the statement was strongly desirable in other college students.

Indicate your own judgments of the desirability or undesirability of the following statements. Please remember that you are to judge the statements in terms of whether you consider them desirable or undesirable when applied to college students. Be sure to make one judgment about each statement. This is not a test and there are no right or wrong answers. Work as quickly as possible. Do not sign your name to this form.

## APPENDIX A-3

## INSTRUCTIONS USED IN OBTAINING SELF-REPORTS OF CLASS CUTTING

Please Check: Sex: M/F. Class: Fr/Soph/Jr/Sr/Grad
College students may miss a class for many reasons. Some reasons are classified as excused or unavoidable absences. Personal sickness, sickness of relatives, legitimate school functions, etc., are examples of excused absences. The other type of class absences are usually called "class cutting" by college students. Any absence which a student could have avoided is usually termed a class cut.

At the bottom of this page you will find a line of numbers. Would you please indicate the approximate number of class cuts that you took last semester by circling the appropriate number. Please indicate the total number of cuts which you took in all of your classes, not just the number of times that you cut one particular class. Thus, if a person cut three full days last semester and he had five classes per day, he would have accumulated fifteen class cuts.

Do not sign your name to this sheet--your identity is not required. You will notice that the information which is required is about last semester and cannot have any repercussion on your grades. Also your present.instructor will not see any of the information which you are asked to give. The information will be used solely in the development of my thesis.

Would you now circle the approximate number of times that you cut your classes last semester. 0-1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32- or More

Total Number of Classes Cut Last Semester

## APPENDIX A-4 <br> INSTRUCTIONS WHICH WERE READ TO SUBJECTS FOR EXPERTMENTAL TRYOUT FOR BOTH FORM A AND FORM B

In this booklet you will find a number of statements about cutting and attending classes. You will note that these statements are arranged in pairs. Look at the example below:
A. Even if I hate a class I go to it anyway.
B. I go to class because I am proud of myself when I make high grades.

For each pair read both statements carefully. You are to indicate which of the two statements is most descriptive of yourself. Circle the letter $A$ or $B$ at the left of the statement which is most descriptive of yourself. If it happens that both statements $A$ and $B$ are descriptive of you, choose the one which is most like you. If $A$ and $B$ are not descriptive of you, you should still choose the statement which is most accurate or descriptive of yourself.

Your choice, in each instance, should be in terms of what is descriptive of yourself at the present time and not in terms of what you think you should be like or what you would like to be like. If you find it hard to choose between two statements just make the best choice you can. This is not a test. There are no right or wrong answers. Your choices should be a description of yourself.

You will note that the following pairs of statements in this booklet are printed on both sides of the pages and that they are similar to the example given above. Please do not skip any pair. Work as quickly as possible. Do not sign your name to this form.

You may begin:

## APPENDIX A-5

## INSTRUCTIONS WHICH WERE READ TO SUBJECTS UNDER HONEST CONDITIONS FOR BOTH FORM A AND FORM B

In this booklet you will find a number of statements about cutting and attending classes. You will note that these statements are arranged in pairs. Look at the example below:
A. Even if $I$ hate a class $I$ go to it anyway.
B. I go to class because $I$ am proud of myself when $I$ make high grades.

For each pair read both statements carefully. You are to indicate which of the two statements is most descriptive of yourself. Circle the letter $A$ or $B$ at the left of the statement which is most descriptive of yourself. If it happens that both statements $A$ and $B$ are descriptive of you, choose the one which is most like you. If A and B are not descriptive of you, you should still choose the statement which is most accurate or descriptive of yourself.

Your choice, in each instance, should be in terms of what is descriptive of yourself at the present time and not in terms of what you think you should be like or what you would like to be like. If you find it hard to choose between two statements just make the best choice you can. This is not a test. There are no right or wrong answers. Your choices should be a description of yourself.

You will note that the following pairs of statements in this booklet are printed on both sides of the pages and that they are similar to the example given above. Please do not skip any pair. Work as quickly as possible. Do not sign your name to this form--your identity is not required. When you complete page nine stop and wait for further instructions. You may begin:

## APPENDIX A-6

INSTRUCTIONS WHICH WERE READ TO SUBJECTS UNDER BEAT CONDITIONS FOR BOTH FORM A AND FORM B

You will notice that the statements in the last half of this booklet are an exact duplication of the ones which you have just completed. However, in this next section you are to respond to the statements different$1 y$.

From each pair you are to pick the one statement which you feel would help you most in obtaining entrance into college. Indicate the one statement from each pair which you pick by circling the letter $A$ or $B$ at the left of the statement,

Assume that you are a high school senior and your chances for entrance into college may depend upon how you score on this questionnaire. Since you are trying to make the best impression that you can your choices may not necessarily be descriptive of yourself. Try to make the best possible score.

Read each statement carefully. Work as quickly as possible. Please do not skip any pair.

You may begin:

APPENDIX B

## APPENDIX B

## ITEMS FOR WHICH FAVORABILITY INDICES WERE COMPUTED

Favorability indices were computed for all the items in Appendix B. The first number following the item number is the favorability index for that item which was developed by the median method. The second number following the item number is the favorability index for that item which was developed by the method of successive intervals. The favorability indices for five items were not computed because more than fifty per cent of the judgments were placed in the first interval. The median values for these items were obtained by interpolation.

1. 5.915 .00 I attend class because the instructor may clarify my misunderstandings.
2. 5.704 .71 I enjoy my studies and attending classes even though they are hard.
3. 2.742 .21 . I cut my Saturday class quite often in order to go home.
4. 5.76 4.80 I go to class because I like to take my own notes and hate to use someone else's.
5. 2.502 .65 I cut classes because I do not enjoy them.
6. 5.44 3.79 I attend class regularly because it helps me to make a habit of the academic routine.
7. 3.392 .62 I go to class because I like to conform with the majority of students.
8. 2.432 .76 I cut class when we are just going over the last test.
9. 2.502 .42 I cut class immediately before an exam period in order to cram a bit more.
10. 1.89 1.99 I cut class because it helps to satisfy my need to rebel.
11. 1.15 - - I cut class and don't care very much whether I flunk or pass the course.
12. 3. 3 2. 2.49 I attend class because I'm short on money and can't afford to flunk.
1. 2.262 .53 I cut class often because $I$ feel inferior to the other students.
2. 1.45 --- I'm proud of the fact that I don't go to class.
3. 3.902 .47 To reduce boredom in an easy class I spend little time on it--but I still go to the lecture.
4. 2.992 .37 When $I$ cut class I never talk to the instructor about it.
5. 5.143 .58 I have never cut one class to study for another.
6. 5.503 .37 I attend class because I've always had the need to be the best in everything I attempt.
7. 1.93 2.06 When I've cut so much that I'm behind I find myself cutting even more.
8. 2.33 2.63 I often cut my night class just because it's held at that hour.
9. 3.992 .56 I go to class because $I$ don't like to spend time hunting down someone else to get the day's notes.
10. 2.00 2.16 When $I$ can never get a good grade out of a course because of the instructor, I cut class.
11. 2.322 .62 I cut class right after a test because the next one is a long way off.
12. 6.21 5.41 I go to class because I have a high degree of consideration for myself, my family, my university and my future.
13. 6.165 .35 I am here to learn and the best way to do that is to take advantage of every minute of instruction $I$ can get.
14. 5.64 4.65 If most of the material on the test is from lecture alone I attend class out of necessity.
15. $1.932,06$ I cut often because I don't know what I want to major in yet.
16. 2.63 2.15 I cut class because I don't like the atmosphere of the classroom itself.
17. 4.653 .22 I usually take one or two cuts, well-timed of course, during the semester.
18. 5.36. 3.74 I come from a family where the importance of attending classes was pointed out to me.
19. 4.89 3.39 I go to class because I may get extra points for class participation.
20. 2.70 2.18 If $I$ miss a scheduled exam because of class cutting $I$ can most always take the make-up.
21. 5.67 4.69 I go to class whether it is either interesting or boring.
22. 2.642 .15 I sometimes cut class for fear of being called on to participate in the discussion when $I$ don't know the material.
23. 2.622 .09 I'm interested in some sport and $I$ cut class sometimes to play it.
24. 5.50 3.84 $I$ fael guilty if. $I$ do not go to class:
25. 5.94 5.74 I maintain almost a perfect attendance record.
26. 2.342 .65 When $I$ have an 8:00 a.m. class and my roommate doesn't I cut that class more often and sleep too.
27. 2.942 .33 I cut class because the instructor can't explain things very well and this irritates me.
28. 5.925 .04 I go to class because it would be a great waste not to take advantage of the opportunity.
41.. 2.62 2.15 I cut class now even though I know I might be sorry for it later on.
29. 2.792 .25 I cut class because the instructor makes me feel stupid.
30. 1.77 1.84 When $I$ do poorly on the first test after studying a great deal I just give up.
31. 2.20 2.45 After a test in a course I will cut that class because I deserve a vacation.
32. 5.965 .07 When $I$ do well on the exams $I$ stay in class to keep my grade at a high level.
33. 2.62 2.15 I cut class because I truly enjoy the variety of college life and the many different events which happen each day.
34. 1.45 ---- I'm a lazy person who'd rather sponge notes off my friends than to go to class.
35. 1.98 2. 13 I don't think I'm losing any money by just cutting class.
36. 2.622 .15 I attend class because everyone else is there and $I$ have nothing to do.
37. 6.28 5.51 I attend class not because. I have to but because $I$ want to learn.

| 51. | 2.83 | 2.27 | I cut my classes and feel that it has no effect on the other students. |
| :---: | :---: | :---: | :---: |
| 52. | 1.90 | 2.09 | When I don't do well on one or two exams I start cutting my class. |
| 53. | 1.96 | 2.09 | I cut class because no one is around to make me go. |
| 54. | 2.76 | 2.22 | When $I$ can pass without going to class $I$ cut it because it leaves more time for other classes. |
| 55. | 2.23 | 2.50 | I try to get a seat near the rear of the room so my absences won't be noticed. |
| 56. | 5.57 | 4.56 | I attend class regularly when the instructor says that you have to be there to pass. |
| 57. | 2.35 | 2.66 | I cut class because $I^{\prime} m$ afraid the instructor may ask me to recite. |
| 58. | 2.12 | 2.33 | I always weigh the situation to decide what $I$ want to do--quite often class loses. |
| 59. | 5.86 | 4.94 | I go to class to keep current and to take part in the good discussions. |
| 60. | 4.21 | 2.60 | In the spring I find it very easy to cut my afternoon classes. |
| 61. | 2.65 | 2.14 | Sometimes I over estimate my intelligence; cut my classes and do poorly. |
| 62. | 1.71 | 1.73 | I simply don't care about attending class. |
| 63. | 2.39 | 2.72 | I sometimes cut my class to have a coke date with a particular person. |
| 64. | 1.92 | 2.06 | I cut class because I'm flunking and I'm embarrassed about it. |
| 65. | 5.00 | . 3.47 | I cut only one or two times a semester because any more will hurt my grade. |
| 66. | 5.76 | 4.80 | I attend class because I'm highly motivated and have a high level of aspiration. |
| 67. | 2.06 | 2.23 | I cut many classes because I like to think of myself as being a radical. |
| 68. | 5.37 | 3.73 | I attend class because $I$ have to come to keep up with the course. |
| 69. | 1.91 | 2.01 | I cut class because it is not worth the time for the little knowledge that can be obtained. |

70. 5.03 3.50 I attend class because I'm having a rough time in school and I fear low grades.
71. 1.902 .01 I cut a lot because I have no aim as yet and I'm in school just for something to do.
72. 4.913 .41 I attend class because I like to be around my classmates.
73. 2.22 2.46 Sometimes I would like to go to class but find that I am too lazy to make the effort.
74. 2.242 .50 I often cut required courses which are not part of my major because I see no sense in wasting valuable time and effort.
75. 5.13 3.56 If I missed a class I might miss an exam and $I$ hate to take make-ups.
76. 5.283 .66 I attend class because I'm a dedicated scholar and don't want to miss a thing.
77. 5.85 4.94 Grades have no bearing on my attendance--no matter what I make I still attend class.
78. 4.502 .68 I go to class because I gain social approval for doing so.
79. 5.503 .84 I go to class because attendance may mean a difference in my grade average.
80. 2.39 2.73 I often cut class and then think of a reasonable sounding excuse to give to the instructor.
81. 6.005 .12 I attend $c$ lass because I'm mature enough to take the responsibility to get to class.
82. 5.814 .88 I find lectures interesting and go everytime to learn as much as I can.
83. 2.502 .88 I cut my classes as long as I'm not missed.
84. 2.20 2.45 When I'm not docked points for cutting, I won't attend class.
85. 5.97 5.16 I go to class because I have an intense desire to learn and to be a better person in my field.
86. 2.83 2.27 In general I cut those classes which are not too important.
87. $5.06 \cdot 3.26$ I attend class now a whole lot more regularly than $I$ did in high school.
88. 2.37 2.66 I attend class now a lot less than $I$ did in high school.
89. 5.76 4.80 I go to class to obtain lecture notes which I use in preparing for a test.
90. 5.56 4.55 I never take a second thought about going to class--I feel it is required so I go.
91. 2.61 2.15 I make no effort to schedule professional appointments (dentist, etc.) during my off class hours.
92. 2.772 .24 I cut class when the instructor is lecturing over an easy topic.
93. 5.67 4.68 If $I$ am enrolled in a boring course I make a special effort to enjoy it and always appear for lecture.
94. 5.664 .67 I very seldom, if ever, cut Friday afternoon classes just to get home early.
95. 3.302 .57 I attend class because I'm a timid student and I'm afraid to miss.
96. 6.095 .25 I balance my time wisely so that $I$ can attend class and take part in other activities too.
97. 2.202 .45 I cut a lot of classes when $I$ have bigemotional troubles like breaking up with my sweetheart.
98. 1.98. 2.13 Often I cut class to spend the extra time talking with the gang.
99. 2.092 .29 I cut class because when I left home the feeling of freedom was too much for me to cope with.
100. 4.75 3.31 When I cut class and feel unprepared, I go to a classmate for help in getting the lesson I missed.
101. 5.00 3.47. I attend class more regularly right before an exam.
102. 5.68. 4.71 I go to class because the instructor is very interesting.
103. 1.71 1.76 $I$ don't like to attend class and often $I$ influence others to cut also.
104. 2.892 .30 I cut class because I don't like the attitude of the instructor toward the class.
105. 5.764 .80 I attend class because I find the instructor's advice and encouragement helpful.
106. 5.86 4.94 I like all of my classes and attend them regularly.
107. 2.22 2.46 When I do poorly in class and know nothing about the assignments, I cut class to keep from being embarrassed.
108. 2.24 2.50 When an instructor thinks poorly of me for any reason I cut his class frequently.
109. 2.02
2.19 When I have a bad attitude toward a class I cut it instead of trying to overcome the difficulty.
110. 2.142 .36 I cut class because I feel that attending won't be very important on my grade.
111. 1.56 1.48 I cut class and $I$ don't think I'm hurting my parents because they are pretty well off.
112. 1.92 2.04 I cut class if we are going to just review for a test.
113. 2.902 .12 I know that my parents would threaten me if I did not attend classes.
114. 5.65 4.65 I used to cut a lot but due to the good influences of my friends I now attend class regularly.
115. 2.07 2.27 I cut class because I feel rejected by my classmates and my instructor.
116. 4.50 2.47 I cut class and I'm not particularly proud of it.
117. 5.664 .57 I attend class to straighten out things by asking questions.
118. 2.19 2.43 I cut class because I have trouble making myself go.
119. 2.412 .75 I cut class because I'm afraid of being wrong when I do something in class.
120. 2.11 2.33 I cut class to conceal my ignorance of the subject.
121. 2.19 2.43 When I can get a friend to answer or sign in for me in a large section where the teacher is not familiar with everyone I will do it.
122. 2.91 2.32 I cut my class often because I find it hard to work and go to class too.
123. 4.50
2.68 I attend class regularly because I don't have to worry about dates and the dating situation.
124. 5.80 4.86 I go to class because I am proud of myself when $I$ make high grades.
125. 2.412 .75 I cut class a lot when I feel beaten down at every turn.
126. 2.23
2.47 I cut class because the instructor tries to force me to attend.

| 127. 3.29 | 2.55 | I take part in school sports, some but not all of my cuts are legitimate. |
| :---: | :---: | :---: |
| 128.4.76 | 3.30 | I go to class because I'm very rule conscious and fear the consequences of missing class. |
| 129.3.19 | 2.50 | I cut class when little effort is made on the instructor's part to present interesting lectures. |
| 130. 1.98 | 2.13 | I didn't intend being a high class-cutter, but.it's like opium and I soon became addicted to it. |
| 131. 4.90 | 3.40 | I attend class regularly because my parents want me to. |
| 132. 1.83 | 1.91 | When I'm flunking I cut class even more--might as well make it as easy on myself as I can. |
| 133. 2.45 | 2.79 | I cut class because the instructor does not give ample opportunity to ask pertinent questions. |
| 134. 6.42 | 5.72 | When I don't do well on the first and second exam I do not give in but fight that much harder. |
| 135. 5.92 | 5.03 | Even if I know a subject I go in hope that I will pick something else up. |
| 136. 5.85 | 4.91 | In some of my classes it is hard for me to cut because one cut will cause me to fall behind. |
| 137. 2.20 | 2.43 | I cut classes often because I have a lot of social pressure put on me by various organizations. |
| 138. 2.07 | 2.24 | I cut class quite often because I do not enjoy being in school. |
| 139. 3.23 | 2.52 | When the instructor is teaching way below my level I'm likely to cut class. |
| 140. 5.95 | 5.06 | I attend class because the lecture makes my studying easier. |
| 141. 4.50 | 2.68 | I attend class because to me it is a crutch, a helping hand, for I don't read the text very often. |
| 142. 2.17 | 2.40 | I cut class because I'm not prepared due to poor study habits. |
| 143. 2.09 | 2.29 | I cut classes often when I become confused about things. |
| 144. 1.80 | 1.87 | When I have a "steady" I cut lots of classes. |
| 145. 2.45 | 2.79 | I cut class because I'd rather be out in the sunshine than inside a classroom. |

146. 5.23 3.64 I attend those classes in which $I$ would be graded down for cutting.
147. 2.13 2.33 I cut class because when I do poorly I feel guilty and the classroom reminds me of it.
148. 2.25 2.46 When each student is reciting in class $I$ cut until it is my turn.
149. 2. 83 2.27 I usually attend the classes in which there might be a pop-quiz and cut the ones in which a quiz is very unlikely.
1. 2.71 2.20 If I'm deeply bothered by personal problems $I$ am likely to..cut class.
2. 5.04 3.50 $I$ attend class even when $I$ have a headache.
3. 5.00 3.47 When I cut I plan it so I won't miss a quiz, a good lecture or a test.
4. 6.06 5.21. I go to class because I'm genuinely interested in an education and a diploma.
5. 3.43 2.65 I do not cut class because I'm afraid of the instructor's wrath.
6. 5.43 3.79 I find class pleasant because I agree with most of the things the professor does.
7. 5.80 4.86 I find time to attend class even though I'm a leader in more than one organization.
8. 2. 20 2.45 If something comes up I usually do it in preference to going to class.
1. 1.96. 2.16 I cut classes to go to the Union to be around persons of the opposite sex.
2. 5.82 4.88 I go to class because I hate to miss out on anything that is said in class discussion.
3. 5.61 4.60 I attend class because I'm well adjusted to college.
4. 2.11 2.33 I need no persuasion to cut class.
5. 2.402 .73 I cut class because it's not challenging.
6. 5. 15 3.58 I attend every class because some of what I'm expected to know is bound to soak through.
1. 2.05 2.23 I miss class even though my grades reflect my frequent class cutting.
2. 2.07 2.23 Sometimes I cut class because I dislike the location of
the meeting place.
3. 1.972 .11 I cut class because I'm going to flunk whether I go to class or not.
4. 1.45 - At Atending class is the farthest thing from my mind.
5. 1.71 1.73 I cut class a lot but I'm not particularly concerned about it.
6. 6.065 .21 I attend class regularly because I realize that my grades will influence my future very much.
7. 5.764 .80 Even if $I$ hate a class $I$ go to it anyway.
8. 2.262 .53 I started to skip one class to prepare for the other and this soon became an established routine.
9. 2.252 .50 I cut my afternoon classes the most because of the many interesting things that can be done during these hours.
10. 2.38 2.69 I find it very difficult to attend class when it is raining and cold outside; the bed looks much better than a long walk to class.
11. 1.801 .87 I cut classes because I'm here just for the prestige of being enrolled in college.
12. 2.94 2.33 I cut class when an instructor tries to impress on the class that we can never attain his level of knowledge.
13. 1.57 1.55 I like to party, play cards, etc., on school nights and cut classes the next day.
14. 5.27 3.67. I attend class because I like the instructor personally.
15. 1.92 2.04 I cut class because I'm here just to obtain a spouse.
16. 5.78.4.84 I attend class regularly and never let the pressure of college life get me down.
17. 2. 562.11 I cut class because when $I$ usually attend I'm bored into a trance-like state.
1. 6.005 .14 I think that going to class regularly now will help me later as an employee.
2. 5.955 .06 I attend class to maximize my ability to obtain a good grade and to get my money's worth out of the class.
3. 2.50 2.88 I usually cut Saturday classes because psychologically I find them boring for I know everyone else is asleep or doing something else.
4. 2.07 2.24 I cut class a lot because I'm just not in the mood.

| 185. 2.39 | 72 | I cut class frequently so $I$ won't miss a ride home on Friday afternoons. |
| :---: | :---: | :---: |
| 186. 5.88 | 4.96 | I attend class because it is a valuable supplement to the reading material. |
| 187. 1.93 | 2.07 | I have good intentions of going to class, but all I have to do is walk through the Union, see a friend and I stay in the Union for the next hour. |
| 188. 1.96 | 2.10 | I'm slower in learning than the rest of my class and I cut class a lot to keep from being embarrassed. |
| 189. 2.15 | 2.36 | When I'm doing poorly in one course $I$ cut it and concentrate on my other studies. |
| 190. 1.90 | 2.01 | When I have problems in class I solve them by running away-I cut the class. |
| 191. 5.93 | 5.04 | I make a special effort to attend class for a review period. |
| 192. 2.50 | 2.88 | I cut class right after a test because nothing really important is given so soon after a test. |
| 193. 1.72 | 1.74 | I don't go to class to get back at my parents. |
| 194. 2.59 | 2.18 | I cut class because the instructor lectures only out of the book. |
| 195. 2.06 | 2.26 | I cut class to show friends that I'm a "good guy" and don't mind cutting class every now and then. |
| 196. 2.00 | 2.17 | I cut class a lot because I'm afraid of my classmates. |
| 197. 6.02 | 5.15 | I become disturbed when I do badly on an exam and I try twice as hard on the next one. |
| 198. 2.40 | 2.73 | I cut a class more often if I feel I was forced to take it. |
| 199. 5.60 | 4.59 | I seldom cut class just for the heck of it. |
| 200. 5.83 | 4.90 | I enjoy going to class and never feel any embarrassment there. |
| 201. 2.19 | 2.43 | I cut class because too much pressure is exerted on me to make good grades. |
| 202. 6.00 | 5.12 | I attend class because I know that obligations and responsibilities must be met even if they are unpleasant. |
| 203. 1.94 | 2.09 | I cut as many classes as I can--all I want is a diploma and a good job. |

204. 1.932 .06 I start cutting my classes well before the first exams.
205. 2.50 2.88 I cut class because the lecture is improperly presented.
206. 2.58 2.12 I frequently cut film sessions, lectures in the University Auditorium, etc., because I can get away with it.
207. 2.06 2.24 I cut class to avoid some person.
208. 2. 20 2.45 I like to depend on other people to encourage me to attend class.
1. 3.34 2.57 I attend class because the group I run with goes to class.
2. 2.062 .23 I cut class because $I$ got in with the wrong crowd.
3. 3.83 2.47 I go to class for no other reason than I'm just in the habit of going.
4. 3.502 .69 I usually cut only when special events come up.
5. 2.642 .15 I cut class because the instructor rarely if ever checks ro11.
6. 1.912 .01 I think my class cutting behavior seems to be growing worse.
7. 2.302 .58 I could slip into the class-cutting habit very easily.
8. 2.912 .32 I cut class because I know the material so well that $I$. could just about teach it.
9. 2.73 2.21 I cut class because I don't like the instructor's method of presentation (he speaks in a monotone, talks too fast, too slow, etc.).
10. 2.44 2.78 I usually attend class only on test days and I'm usually prepared.
11. 5.79 4.84 Since my parents are sending me to school I go to class because I want to show them my gratitude by succeeding in college.
12. 2.25 2.53 I cut class because I can cram at the last minute and make up for it.
13. 6.00 5.11 I go to class not only for a grade but because I'm interested in learning the subject.
14. 2.07 2.24 When my friends cut class I cut mine in order to be one of them.
15. 5.77 4.80 I go to class because the instructor is so specific
about things that $I$ need to be there.
16. 3.64 2.43 I cut some of my classes more than others.
17. 5.44 3.79 I go to class to keep from making a lower grade.
18. 2.24 2.50 I cut class because $I$ don't get anything from going.
19. 6.02 5.15 I go to class because when I learn it makes me feel good and $I$ want to learn more.
20. 2.002 .16 I cut my classes when I feel like it even though my parents are paying good money for my education.
21. 1.98 2.13 I cut class because others do it.
22. 2.03 2.20 I cut class because I have an apathetic attitude toward school and class work in general.
23. 5.503 .84 I go to class because each time $I$ attend $I$ feel good about it:
24. 2. 12 2.33 I cut class often because $I$ have a hobby I'd rather work on than go to class.
1. 1.78 1.84 I skip classes and can see nothing wrong in it.
2. 6.07 5.21 I am in a major that $I$ sincerely enjoy and like going to classes.
3. 2.292 .56 I cut classes a lot at the beginning of the semester because the class is moving slowly and nothing very important is being said.
4. 4.21 2.59 I like class and academic life a lot better than the extracurricular activities.
5. 5.834 .90 I attend class for $I$ know that just having fun or being lazy will not help me in later life.
6. 2.08 2.29 I cut class because my girl or boy friend has an open period when $I$ have class.

239: 1.98 2.13 I cut class because I feel that I'm superior to the other students and don't need to attend.
240. 2.44 2.78 Each time $I$ cut a class it's harder to go to it the next time.
241. 2.34 2.65 The main reason $I$ cut class sometime is because I am just too sleepy to get up or too tired to go.
242. 1.50 -.- I am just plain lazy and don't care whether $I$ go to class or not.

| 243. 1.64 | 1.64 | I go to class just enough to stay in college so $I$ can have an interesting party life. |
| :---: | :---: | :---: |
| 244. 5.17 | 3.58 | I go to class because I might gain a few points on the next exam. |
| 245. 3.40 | 2.64 | I attend class because of the goodlooking boy or girl sitting next to me. |
| 246.3.50 | 2.69 | I always evaluate how important attendance and the lecture is in my various courses to find which ones I can cut and still keep a good grade. |
| 247. 2.34 | 2.65 | I cut class occasionally due to the attraction of the lake. |
| 248. 3.21 | 2.50 | I attend class because the fraternity or sorority gives demerits for cutting. |
| 249. 3.08 | 2.42 | If my grade is not good in a particular class I will cut another to prepare for it. |
| 250. 5.66 | 4.67 | If I'm late to a class $I$ will go on rather than miss class completely. |
| 251. 4.50 | 2.68 | My class cutting would cease if the three cuts and fail system was enforced. |
| 252. 2.09 | 2.29 | If I'm doing something interesting when classtime rolls around I often say "to hell with the class." |
| 253. 2.50 | 2.88 | I cut one of my classes many times but attend all of the others. |
| 254. 2.30 | 2.58 | Having cut a class I hate to go back either because of embarrassment or a surprise pop-quiz. |
| 255. 3.43 | 2.64 | Sometimes but very seldom I cut class to break the boredom of my routing. |
| 256. 1.67 | 1.68 | I chase around all night enjoying campus activities and find myself too sleepy to attend class. |
| 257. 1.95 | 2.09 | I cut class because I'm bored by sitting in class and I can better spend my time in the Union or sleeping. |
| 258. 2.81 | 2.26 | Right before a holiday I get into the spirit of things and find it hard to attend classes. |
| 259. 4.91 | 3.41 | By attending all classes I may impress the instructor which may result in a higher grade. |
| 60. 2.32 | 2.61 | As the class periods increase I cut |

261. 1.68 1.68 I cut class just because I think it's "smart".
262. 1.85 1.93 I'm strictly for myself and do not care about rules of society--this includes class attendance.
263. 5. 28
1. 4.74
2. 2.26
3. 2.77 2.50 I cut class when the instructor has a habit of relating his personal experiences.
4. 3.10 2.44 Most of my classes are interesting but $I$ do cut certain ones frequently.
5. 4.73 3.28 I attend class if I have too many cuts because I'mafraid of flunking.
6. 5.50 3.84 I will cut one class to study for a test in another only if I can afford to miss that class.
7. 2.65
8. 1.83
9. 2. 17 2.40 $I$ cut class when $I^{\prime} m$ not interested in attending because I wouldn't learn anything even if I did go.
1. 2. 23 2.47 I cut class because $I^{\prime} m$ afraid the instructor will embarrass me if I can't completely and accurately answer his questions.
1. 2.04 2.22 I cut class right after a test because I'm afraid to face up to what I made.
2. 2.50 2.88 When an instructor says, "I don't care whether you come to class or not", I cut.
3. 1.95 2.01 In high school my parents were responsible for my attendance, now that they are not here $I$ cut class because I lack the necessary responsibility.
4. 2.35
5. 66 When I'm bored with my schedule I find that by missing certain classes my life is more enjoyable.
6. 5.55 4.53 I attend class because I want to be someone.
7. 2.07 2.27 I make it a point to be in some activity that will take me out of my classes a lot.
8. 2.05 2.17 I cut class and I'm not ashamed of it--I let my friends know when I'm cutting.
9. 2.252 .50 If the instructor doesn't check roll often $I$ will cut some days hoping that the roll isn't taken or a popquiz given.
10. 2.11 2.32 I cut class a lot because I came to college with a misconception of what it would be like.
11. 5.98 5.10 I go to class and try to get the most out of it even if I do make low grades.
12. 2.442 .78 I cut class because $I$ can get high grades with little or no effort.
13. 2.75 2.21 I attend class because I like to show-off my knowledge.
14. 5.25 3.67 I have such a drive to achieve that I will attend class even though I'm sick, sleepy, tired, or even depressed.
15. 2.17 2.40 Often I cut a class because it is boring and tell the instructor that I over slept.
16. 3.00 2.38 I find it hard to attend class after I return from the holidays.
17. 4.87 3.39 I go to class because it will look good on my job application.
18. 2.10 2.29 I get too involved in school activities and organizations and $I$ actually can't find time to go to class.
19. 2.00 2.16 I go to class just enough to make the grade point that is required to remain in college.

APPENDIX C

## APPENDIX C

## INSTRUCTIONS WHICH WERE GIVEN TO THE INTERVIEWEES

 ONE WEEK BEFORE THE INTERVIEWS OCCURREDClass cutting like class attendance is not uncommon on a college campus. Undoubtedly the reasons for attending and cutting classes are very numerous. Little is known about a student's reasons and his feelings about cutting and attending his classes.

College students may miss a class for many reasons. Some reasons are classified as excused or unavoidable absences. This category contains such factors as personal sickness, sickness of relatives, legitimate school functions which includes athletic contests, attending conferences, orientation or observation trips, musical events, etc. The other type of class absences are usually called "class cutting" by college students. Any absence which a student could have avoided is usually termed a class cut.

In the development of my Ph. D. dissertation $I$ am interested in obtaining information which concerns cutting and attending classes. I am mainly interested in the attitudinal and personality characteristics which underlie cutting and attending classes. This information may prove useful in the diagnosis and guidance of college students.

Since your interest and position with the university puts you in a strategic place I would appreciate very much the opportunity to talk with you about this matter at a later date. This delay will give you time to structure some of your past dealings with students which concerned class attendance.

You may find that you have more information regarding the reasons and feelings for cutting class than you have for attending class, since
the student who attends class will not be brought to your attention. However, any information which you may have concerning both points will be useful.

APPENDIX D

## APPENDIX D <br> INSTRUCTIONS WHICH WERE GIVEN TO THE FOUR EXPERT JUDGES

Please sort each item into one of the following three classifications:

1. An unavoidable situational category (such as a flat tire, broken limb, blizzard conditions, etc.).
2. An attitudinal and personality category.
3. Items which are redundant and/or inadequate.

If you feel that the use of another word in an item would be more appropriate please pencil it in above the word that is to be replaced. Also ascertain if the individual taking the test can understand the item easily and quickly.

VITA

Bob D. Rhea<br>Candidate for the Degree of<br>DOCTOR OF PHILOSOPHY

## Thesis: THE CONSTRUCTION AND ANALYSIS OF TWO FORCED-CHOICE QUESTIONNAIRES MEASURING ATTITUDES TOWARD ABSENTEEISM

Major Field: Psychology
Biographical:
Personal data: Born in Oklahoma City, Oklahoma, November 14, 1933, the son of Robert Kirk and Mada D. Rhea.

Education: Attended grade school in Oklahoma City, Oklahoma; graduated from Capitol Hill High School in 1952 ; received the Bachelor of Science degree from Oklahoma State University, with a major in Psychology, in May, 1956; received the Master of Science degree from Oklahoma State University, with a major in Psychology, in August, 1957; completed requirements for the Doctor of Philosophy degree in August, 1962.

Organizations: Psi Chi


[^0]:    1 Significant at . 05 level of significance.
    2 Significant at . 01 level of significance.
    3 Significant at . 005 level of significance,
    4 Significant at .001 level of significance.

[^1]:    1 Significant at 05 level of significance.
    2 Significant at . 01 level of significance.
    3 Significant at . 005 level of significance.
    4 Significant at . 001 level of significance.

