A Pilot Study to Investigate the Procedures Used in the Selection and Evaluation of Missionaries.

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A PILOT STUDY TO INVESTIGATE THE PROCEDURES
USED IN THE SELECTION AND EVALUATION
OF MISSIONARIES

A Dissertation
Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
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in
The Department of Psychology

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This study would not have been possible without the many years of time, effort, and cooperation of a vast number of people. I wish I could name each person who has made contributions to this work, but the sheer number makes this task impossible. Even though I cannot list their names individually, I wish to express my deep gratitude and appreciation to all of them.

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ABSTRACT

The purpose of this study was twofold: To establish criterion measures of effectiveness in overseas missionary performance and to find predictors of these criteria. Predictor and criterion variables that would be broadly representative of the selection process and of overseas performance were established through the combined efforts of knowledgeable people in the missionary enterprise.

The information for the predictor variables consisted of background data gathered from church board files. The criterion data pertained to personal, social, and professional factors and were secured from board files, from administrative personnel in the home offices, and from 137 missionaries and colleagues of the missionaries in the Philippines. Two instruments were used in the data collection process, "The Missionary in Action - A Descriptive Check List" (MINA) and "The FIRO-E" (Fundamental Interpersonal Relations Orientation-Behavior). The MINA was designed for this study as a tool to measure behavioral attributes considered to be relevant to the missionary enterprise.

In addition to reliability and validity tests of the MINA, this instrument was factor analyzed, resulting in the establishment of 11 basic behavioral dimensions. The factor loadings were in turn used as factor score weights.
The MINA and PIRO-3 profiles for each missionary were compared to the profiles of his colleagues through the use of the coefficient of pattern similarity, \( r_p \). The information from these two statistical processes were used as criterion variables.

The interrelations between 46 predictor and 25 criterion variables were studied by the canonical correlation method. Two canonical correlations were performed; the first included the total population of 137 missionaries, while the second only included 78 missionaries who had entered service within the past 13 years. The rationale for the second analysis pertained to the need to examine as predictors certain selection procedures which were instituted by the church boards within the past five or ten years.

The results of this study accentuated the need to establish criterion measures of effective overseas performance on the basis of information gathered in foreign cultures. Generally, the criterion variables had low correlations with the predictor variables and with other criterion variables. It was felt that much of the difficulty in isolating useful criteria related to the failure to validate some of the criterion measures for the Philippines population.

In support of this position, the MINA, which was developed primarily on the basis of work done in the Philippines, proved to be the most promising aspect of the
study. The results indicated that the MINA is a useful tool in measuring the 11 behavioral dimensions defined by the factor analysis and that these behavioral attributes are important criterion variables, at least for the Philippines population.

Significant results were found between the predictor and criterion variables. The major finding was that certain Sending Boards have been more effective than others in selecting missionaries that meet the defined criteria. Since the study failed to isolate the selection procedures which led to their decisions, it was felt that further examination of their methods was needed.

Overall, the study pointed to the need for the concentrated investigation of criterion measures. Progress was made in that direction, and information on which to build was provided.
INTRODUCTION

Church boards have been sending large numbers of missionaries abroad for many years. In 1958 there were 29,609 Americans and Canadians serving in foreign countries, and the number has increased since that time. Millions of dollars are spent annually to recruit, train, and maintain this body of overseas personnel. Despite the large number of people involved and the vast expenditures of money, little is known about the quality of services being rendered, the elements which make for effective overseas performance, and the personal characteristics and experiences needed to succeed in missionary service (Cleveland, Mangone, and Adams, 1960). This lack of knowledge regarding the missionary enterprise has prevented the establishment of criteria for measuring the effectiveness of overseas missionary performance and, consequently, the selection of predictors of these criteria.

The investigation of missionary services, specifically, has been the focus of very few research endeavors. While extensive efforts have been made to examine overseas work as a general area, these efforts have contributed very little to our understanding of the components involved in the measurement of overseas performance.

The failure of past research efforts to produce useful criteria and predictor variables appears to be due to the lack of a systematic approach to the problem. Most successful research is done within a conceptual framework
that defines or establishes all phases of the investigation, with the various phases coordinated toward an ultimate goal. If the ultimate goal is to predict some type of behavior or job performance, as has been the case with much of the research on overseas work, the researcher should have reliable knowledge of the criterion (or criteria) or should make a criterion analysis prior to the selection of the predictor variables. Even though a need for detailed knowledge of objectives has been shown repeatedly (Menninger and English, 1965; Gunderson and Kapfer, 1966), as far as is known, no systematic research has been done on the criteria for selecting overseas personnel. The major dimensions involved in working in an overseas situation remain undefined.

From a logical standpoint, then, past researchers have been operating on an intuitive or an a priori basis. An overall theory for selection and evaluation procedures has failed to emerge; consequently, the results of the research efforts have been disappointing.

Even though the overall results have been unimpressive, several studies have provided some insights into the problem of investigating the selection and evaluation of overseas personnel. These studies will be discussed in terms of the information they have provided in relation to criterion or predictor variables.

**Criterion Variables**

Empirical research that contributes to the understanding of criterion variables is extremely limited. Most
of the available information is on an assumption level and has been derived from observational, rather than experimen­tal, data. Further, investigators have been primarily interested in examining selection procedures and, secondarily, have provided information pertaining to criteria.

Torre (1963), in a general review of overseas personnel selection, discussed certain criteria which he considered relevant to the overseas situation. He proposed that a successful adjustment to situational factors is necessary, but at the same time he pointed out that "successful adjustment" is undefined and in many instances the situational factors are unknown. Technical and language skills were offered by him as criteria, but he cautioned that they are by no means sufficient qualifications. Unless the skills are utilized in such a way that they are accepted by the local society, they fail to contribute to the candidate's adjustment. Similarly, service to others could be a criterion; but, without personal satisfaction and enjoyment, success is unlikely to be attained. Analogous observations could be made pertaining to organization skills, social skills, family relations, and physical health. His main point was that with the present limited knowledge of the elements involved in effective overseas performance, the utility of any one element should not be considered in isolation.

Jones (1967) was primarily interested in evaluating the predictive validities of measures used in the
selection of Peace Corp Volunteers. However, a finding which grew out of this study is extremely important to the selection of criterion measures. Two criterion measures, Job Competence and Employment General Ability, yielded a significant negative correlation with one another. This correlation indicated that low General Ability based on Employment respondents in the home situation was associated with high Job Competence ratings obtained from Overseas Peace Corps representatives. The author stated it was "tempting to speculate on the possibility that certain behavioral attributes which cause Employment respondents in this culture to view some Volunteers favorably, may be attributes which cause Peace Corps representatives to view the same Peace Corp Volunteers unfavorably in a foreign culture." (p. 20) Then, too, it should be considered that results may differ within various job environments. For example, for teachers the requirements in both the United States and foreign cultures may be quite similar, whereas for Community Development Volunteers they may be quite different. Regardless of the explanation, Jones' study does suggest that criterion measures for the prediction of overseas performance cannot be derived on the basis of information gathered in this culture.

**Predictor Variables**

Psychological examinations, background information, and situational variables have been investigated as predictors of successful overseas performance. The measures used
in prediction have depended to some extent on intuitive judgments of the investigators since the elements which make for effective performance is relatively unknown.

A number of sources have suggested that psychological examinations help to reduce the occurrences of incompetence, maladjustment, and breakdown in overseas situations and that selection procedures are more effective with than without psychological tests. Various branches of the armed forces extensively and effectively used tests for selection and classification purposes during World War II (Anastasi, 1966). Maniffmann (1947) discussed the use of projective techniques in the wartime assessment program of the Office of Strategic Services (OSS). As is frequently true in overseas positions, the nature of the performances required by the OSS assignments were not clearly known. Once overseas, the candidates were often given duties totally different from those for which they had been recruited. Therefore, the usefulness of special ability tests was limited, and the importance of knowing the candidates general effectiveness in situations involving stress, novelty, and frustration and in interacting with a wide variety of people was accentuated. For such an evaluation it was felt that a conception of the candidate's personality as a whole was indispensable. However, the understanding of the individual personality was not a goal in itself, but merely a means for making broader and more reliable predictions of his performance. The personality assessment was only one
part of the overall evaluation, but it was assigned a central position in the interpretation of the rest of the data and was found to be valuable in this role. This emphasis is an important one, not only for OSS assignments but for overseas positions generally. As was pointed out in relation to criterion variables (Torre, 1963), with the present limited understanding of the overseas selection problem, the merits of any one procedure should not be considered in isolation.

A study by Mischel (1965) showed that scores made by Peace Corp Volunteers on self-report measures (F, Ego Strength, and Manifest Anxiety Scales) were related significantly to overseas staff ratings of the volunteers' performance. However, Mischel suggested that more research should be done to establish the conditions under which accurate self-predictions can be expected. In Mischel's study the subjects were told that the results would not be used to make decisions about individuals. This assurance could have led to sets that minimized distortions in test responses.

Clinical ratings were made on Navy and scientist participants in seven expeditions of the United States Antarctic Research Program (Gunderson and Kapfer, 1966). Evaluations by station supervisors and peers were used as criterion measures. The findings based on the use of the Rorschach technique as a predictor were consistently non-significant; however, both psychologists and psychiatrists
achieved positive, though low, results when using a flexible interview procedure. Better results were achieved with these interviews when the examiners had detailed knowledge of assessment objectives and the Antarctic environment.

Psychological techniques, then, have been found to be useful tools in the selection process, even though there are limitations to this usefulness. Other studies have pointed to the importance of background information as a source of predictor variables.

Jones (1967) evaluated the predictive validities of background information obtained from Full Field reports on Peace Corps Volunteers (PCVs) and of Training Assessment Data obtained during the orientation program for the PCVs. Overseas Overall Performance rating and Overseas Language Fluency were used as criterion measures. The validities for the Full Field data and Training data suggested moderate predictive capabilities for these two measuring devices. Substantial increases in the multiple predictions were obtained by combining the two sources of data.

Mabry (1969) was interested in factors associated with career change and continuity among Methodist missionaries. He found the following background variables to be significantly related to continuation in service: (1) Being born in the United States, (2) Being students at the time of formally applying for overseas service, (3) Having parents who were Methodists, (4) Having grade point averages in the B or C range rather than A range, (5) Having
had some religion courses prior to applicancy, (6) Being single or only engaged at the time of applicancy, and (7) If married, having no children over five years of age.

Fabry's (1969) study also suggested the consideration of situational variables involved in the overseas assignment. Situational variables were found to be consistent with, though not always significantly related to, career continuity.

Torre (1963) emphasized situational variables in his general discussion of overseas personnel problems. Adjustment problems are inherent in overseas assignments which are not present in home situations. The candidate and his family must adjust to an abrupt change of language, culture, climate, living conditions, and associates. He must learn to live and to work effectively with these people without the support of any known environmental features. These special conditions add a dimension to the selection process which is not found in the usual job requirements. Torre concluded by saying that since little is known about the qualifications necessary for successful adjustment of people going from one culture to another, this area has received little attention in the selection process.
STATEMENT OF THE PROBLEM

The above studies point to the importance of specifying the components of overseas performance, of establishing criteria for evaluating effectiveness of this performance, and of considering the prediction of the performance of individuals about to be sent abroad in relation to these criteria. These studies also show that previous attempts to establish predictors of acceptance for and success in overseas assignments have approached the problem by looking at isolated variables, such as the effectiveness of psychological evaluations, and have used criterion variables established on an intuitive or an a priori basis.

Personnel Secretaries for the various Mission Boards associated with the National Council of the Churches of Christ and psychologists who have assisted in the selection of candidates for the mission field have recognized the limitations of their selection methods. For some time they have felt a need to evaluate current methods. With the purpose of evaluation in mind, a group of Missionary Personnel Secretaries and psychologists met in conference on December 2 and 3, 1966. The present pilot study was an outgrowth of the 1966 conference (Dreger, 1967). Subsequently, the National Council of the Churches of Christ established the Committee on Selection Standards and Procedures of the Committee on Overseas Personnel, with representatives from the various denominations within the National Council, to pursue the investigation of selection
procedures.

It was immediately apparent that the scope of the study would need to go beyond the evaluation of selection methods and consider the evaluation of the effectiveness of the Christian missionary as well. Therefore, predictor and criterion variables that would be broadly representative of the selection process and of overseas performance were established. A complete description of and basis for these two sets of variables was given by Dreger (1967) in the "Research Design for Evaluating the Effectiveness of Several Predictors of Acceptance for and Success in the Christian Missionary Enterprise" (See Appendix A).

It was also recognized that many predictor and criterion variables would need to be examined in relation to one another rather than separately. Since the emphasis was on discovering new relations and structures, it was felt that a multi-hypothetical approach would be required in defining the predictors and the criteria and in discovering relationships between the two (Hundleby, Pawlik, and Cattell, 1965). This approach in turn would necessitate the use of multivariate procedures in the analysis of the data since these methods are uniquely designed to provide scientific parsimony or economy of description in classifying or verifying scientific hypotheses (Harman, 1967).

The primary focus of this pilot study, then is to examine predictor variables in relation to measures of effectiveness in overseas missionary service. As far as
is known, an empirical investigation of this scope has never been undertaken.
METHOD

Subjects

The subjects were 137 missionaries, men and women, who were associated with the United Methodist Church, United Church of Christ of the Philippines, American Baptist Foreign Mission Society, the Episcopal Church, and the Missouri Synod Lutherans. The majority of the female missionaries were wives of male missionaries. These subjects were in service in the Philippines or on furlough as of July 1, 1970, or had completed their missionary term, had withdrawn from service, or had been on leave of absence since January 1, 1968.

Sources of Data

A systematic review and tabulation of background data from Board files in the home offices was made. This information was listed as "Predictor Variables" (See Appendix B) and concerned the denomination of the candidates, psychological-psychiatric evaluations, appraisals made by endorsers and personnel secretaries, involvement in campus and church activities, marital and parental status, educational and ecclesiastical status, family background, age, sex, race, personal and missionary goals, missionary orientation, area of specialization, and situational variables.

Information concerning the "Criterion Variables" (See Appendix B) was secured from Board files, from admini-
strative personnel in the home offices, and from the missionaries in the field. The information pertained to length of service, service status, health, ratings of supervisors, professional adjustment factors, and descriptions of the missionary in work and social relationships through two instruments, "The Missionary in Action - A Descriptive Check List" (See Appendix D) and "The FIRO-B" (Fundamental Interpersonal Relations Orientation-Behavior).

Description of Instruments

"The Missionary in Action - A Descriptive Check List" (MICA) was designed for this study to measure behavioral attributes specifically relating to personal-social-work relationships of missionaries. Initially, items were derived from the many suggestions pertaining to qualities of missionary effectiveness made by a group of consultants considered to be knowledgeable in the missionary field. The items from this source were supplemented with items representing more general effectiveness as a person in social situations. The total pool of items was subjected to revision, deletion, and/or addition by experts in the missionary enterprise.

The revised pool of items was sent to Father Frank Lynch, a sociologist at the University of Ateneo in the Philippines, where it was translated into Tagalog, a native language, and then translated back to English. On the basis of the translations, further revisions were made
where it was felt the terminology would be confusing to the Filipino people.

The KINA, constructed from the pool of items that was revised in the Philippines, consists of 155 items. It was given a preliminary tryout in the Philippines prior to this study and was subjected to further standardization procedures during the course of this study.

"The FIRO-B" (Fundamental Interpersonal Relations Orientation-Behavior) is a standardized measure of interpersonal relationships (Schultz, 1967). The primary purposes of the FIRO-B are to measure how an individual acts in interpersonal situations and to provide an instrument that will facilitate the prediction of interaction between people. It consists of 54 items which yield six Guttman-type scales. The scales provide measures of the behavior an individual expresses toward others and the behavior he wants others to express toward him. Three interpersonal dimensions (Inclusion, Control, and Affection) are measured for each of the two aspects of behavior (Expressed and Wanted).

Administration of Instruments

The KINA and FIRO-B were administered in the Philippines by the author of this dissertation to the missionaries and to respondents who had worked closely with the missionaries. The same form was administered to the missionaries and to the respondents, usually under group
conditions with the examiner present. The instructions which appear on the covers of the two instruments were read at the beginning of each session. The administration of these two instruments in the Philippines provided a measure of missionary effectiveness derived in the foreign culture.

Ratings of supervisors on the MINA were obtained for 112 of the missionaries from a member of the missionary personnel staff and/or the regional secretary in the home offices. The remaining 25 missionaries were not well enough known to permit ratings by the staff members of either of these offices.

Regional and personnel secretaries from six of the various mission boards completed the MINA and FIRO-B in accordance with their conceptions of the effective, desirable missionary who might stand within the top 10 to 20 percent of missionaries. The median of the six profiles on each instrument served as the "Standard" or ideal profile for the MINA and the FIRO-B.

Analysis of the Data

Prior to the statistical analysis process, the sets of predictor and criterion variables were revised (See Appendix C). When collecting the data, it was found that the frequency of occurrence for certain variables was zero or minimal. For example, there were no recorded emotional breakdowns in parents. This category was deleted from the set of predictor variables. There were only six recorded situations where the missionaries were reared by others.
had a value of four or five, whereas on the remaining 94 items a positive rating had a value of one or two. Therefore, for these items a five was given a value of one, a four was given a value of two, and one and two were given the values of four and five. Any instrument which had more than 30 items rated with a question mark was deleted from the analysis.

After this procedure was completed, the scores for the 567 respondents in the Philippines, missionaries and peers, on the 155 items of the KINA were intercorrelated, and the resulting matrix was subjected to factor analysis. The program used was a principal axes method utilizing squared multiple correlation coefficients as diagonal entries (Harman, 1967). Rotation of the derived factors was accomplished through the use of the Varimax method, which yielded an orthogonal solution. This rotated matrix was then submitted to the Promax method, which yielded an oblique solution (Credit for the integration of these procedures should be given to Richard L. Gorsuch).

After completion of the factor analysis, a scoring system was devised for the KINA based on an analysis of the factor structure. Thirty factors were extracted, but through this analysis it was determined that only 11 of these factors could be interpreted meaningfully. The majority of the remaining 19 factors had factor loadings below .35 and were deleted due to insignificance. Several of these 19 factors were singlets which contained only one
item with a factor loading above .35, and one was a doublet. They, too, were deleted. One of these factors primarily contained items which were included in two other factors and, therefore, was too highly correlated with these two factors to warrant retention. The factor loadings on the 11 factors which were retained (See Appendix E) were used as factor score weights. These weights were multiplied by each respondent's raw scores on these items to arrive at factor scores on the MINA.

The next step in the statistical analysis of the data consisted of measuring the reliability and validity of the MINA. Reliability coefficients were computed for the total test and each of the 11 factors. The coefficients were determined from the intercorrelations of items on the test as recommended by Nunnally (1967). The Pearson product moment correlation coefficient was used to calculate validity coefficients between median $z$ scores for each missionary on the 11 factors and supervisory ratings. The median $z$ scores were taken from the scores of the missionary and peer respondents. The supervisory ratings were derived by having at least three administrators in the home offices designate the top twenty-five percent of their missionaries. These coefficients served as validity measures along with the $r_p$ coefficients described below.

The scores on the MINA and FIRO-B were converted to $z$ scores. This conversion was necessary in order to compute a coefficient of pattern similarity ($r_p$) (Cattell,
which is a method of profile comparison. The Committee on Selection Standards and Procedures felt that one of the most important measures of effectiveness of a missionary would be the reality of his perception of his personal-social orientation. It was decided that one of the best ways to measure this reality perception would be to determine how an individual missionary sees himself in relation to the way others see him. Cattell's \( r_p \) not only provides a measure of this comparison, but also provides a way of examining size or level and shape of a configuration, as well as the overall correlation. The \( r_p \) coefficient was calculated for each missionary between his score and the scores of the peer respondents on the FIRO-B and between his score and the "Standard" FIRO-B profile. Similar \( r_p \)s were calculated for the scores on the MINA. The \( r_p \) between the missionary and the "Standard" profile and the median \( r_p \) between the missionary and the peer respondent profiles were tabulated as criterion variables.

After completion of the tabulation of the predictor and criterion variables, the interrelations between these two sets of measurements were studied by the canonical correlation method as developed by Hotelling (Cooley and Lohnes, 1962). This method provided the maximum correlation between linear functions of the two sets of variables.

At this stage of the analysis there were data which were unavailable on the majority of the missionaries. For example, for many of the missionaries the information
relating to the family background variables was not on record in the files. Information for various categories was missing on different missionaries. Then, too, the coding system necessitated the handling of some data as missing. If an individual had not received a psychological evaluation, the column reserved for coding the psychological recommendation was left blank. When using one of the existing canonical correlation computer programs, all subjects with missing data are deleted from the analysis if the canonical correlations are computed from the raw data. Since this procedure would have resulted in the deletion of most of the subjects, the decision was made to compute the mean for each variable and enter this mean at all points where data were missing. For example, information pertaining to psychological evaluations was available on only 48 subjects. The mean for these 48 subjects was computed, and this mean was entered in lieu of information on psychological evaluations for the remaining 89 subjects. For most categories information was available on at least 100 or more subjects.

A set of variables that contains a linear dependency cannot be used as a predictor set in canonical correlation. Four of the predictor variables formed linear combinations with other variables within this subset; therefore, they had to be deleted during the canonical analysis. For this reason, the categories of "Missouri Synod Lutheran" and "Episcopal" as Candidates' Sending Boards, "Career" as
a Type of Service, and "Other Specialization" under Area of Specialization were deleted. The final analysis was computed on 46 predictor variables and 25 criterion variables.
RESULTS AND DISCUSSION

Analysis of the MINA

The factor analysis of the scores on the MINA delineated 11 factors which seem to represent the major behavioral attributes measured by this test. These 11 factors are shown in Appendix E, along with the factor loading on each item, the number of the item as it appears on the MINA, and a complete statement of the item. Following is a brief description of each of these 11 factors:

Factor A describes a person who is very understanding and accepting of people and ideas. Through the portrayal of these characteristics, he encourages the development of these qualities in others and contributes to the overall harmony of any group with which he associates.

Factor B appears to be describing a person who is unaware of events around him, has very few, if any close friends, has few personal skills for coping with social and professional situations, and has no interest in becoming more sensitive to these events and people. This factor also suggests that a number of items on the MINA need revision. The majority of the negatively phrased items load on Factor B while none of the positively phrased items load on this factor. Because of the ambiguity of the negatively phrased items, the interpretation of their intent was extremely difficult for the respondents and led to confusion in the ratings. The ambiguity of the items and the confusion of the respondents were picked up by this factor.

The positive loadings on Factor C are concerned with an individual's ability to organize his time and energy in such a way that his responsibilities are carried out to the best of his ability and in such a way that the results which are best for a particular project or task are obtained. On the other hand, the negative loadings on this factor are concerned with an individual's lack of
ability to function effectively in organizing a project or task.

The positive loadings on Factor D include items which reflect a person who is open to and accepting of changes in people and social situations. He encourages people to develop as individuals rather than conforming to his or society's expectations. The negative loadings of this factor represent a person who is unable to help others develop their individual capabilities and who is unable to learn from new situations.

Factor E is dealing with the individual's philosophy of life and the way in which this philosophy affects his personal and professional activities. A person with the positive characteristics described by this factor is sought for his advice and companionship because of his logical approach and social sensitivity. On the other hand, a person who has the negative characteristics expressed within this factor has a philosophy which fails to attract others.

Factor F deals with leadership abilities. This factor seems to give substance to the old adage that a good leader is a good follower, but a good follower is not necessarily a good leader. An individual with the leadership abilities here reflected can fulfill the role of a leader when a leader is needed, and yet when the situation requires him to be a follower, he can adapt to this role equally as well. The negative of this factor indicates a person who makes excuses for the failures he encounters within his profession.

Factor G consists of items which pertain to an individual's commitment to Christ and his efforts and abilities to share this faith with others. The positively loaded items relate to a person who has Christian faith and is successful in sharing his faith while the negatively loaded items reflect a person who is lacking in this faith.

Factor H appears to be tapping the traits of humility and dedication. A person with the traits covered by this factor is concerned more with the welfare of others than he is for his own welfare.
The positively loaded items on Factor I describe a person who has the capacities to adjust to the cultural demands and to relate to the people in cultures different from his own. Along with these capacities, he can accept criticisms and explore differences of opinion in a positive manner. The negatively loaded items reflect an individual who has difficulty in situations where these capacities are needed.

The items loading on Factor J are related to whether or not a person is concerned about people with special needs, such as the poor, the blind, and the physically handicapped.

Factor K deals with a situation where there are good relations among the members of the missionary's family and where his home is an example of the type of life he advocates.

Whether or not these same factors will emerge when the MINA is administered to a different population remains to be seen. However, the present factors do represent attributes which generally are considered important in social and professional relationships in the missionary situation.

The reliability coefficients for the MINA are satisfactorily high, with a .98 for the total test and a range of .93 to .73 for the factors. Table 1 presents the reliability coefficients, along with the number of test items included in each computation. It should be noted that Factor J, the single factor with a rather low reliability, contains only four items. The reliability on this factor, as well as other factors, could be increased through the addition of items that correlate highly with the attribute which it measures.
### TABLE 1

**RELIABILITY COEFFICIENTS ON THE NINA**

<table>
<thead>
<tr>
<th>Source of Items</th>
<th>Number of Items</th>
<th>Reliability Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Test</td>
<td>155</td>
<td>.98</td>
</tr>
<tr>
<td>Factor A</td>
<td>16</td>
<td>.93</td>
</tr>
<tr>
<td>Factor B</td>
<td>17</td>
<td>.92</td>
</tr>
<tr>
<td>Factor C</td>
<td>17</td>
<td>.92</td>
</tr>
<tr>
<td>Factor D</td>
<td>11</td>
<td>.86</td>
</tr>
<tr>
<td>Factor E</td>
<td>13</td>
<td>.92</td>
</tr>
<tr>
<td>Factor F</td>
<td>9</td>
<td>.81</td>
</tr>
<tr>
<td>Factor G</td>
<td>9</td>
<td>.57</td>
</tr>
<tr>
<td>Factor H</td>
<td>8</td>
<td>.87</td>
</tr>
<tr>
<td>Factor I</td>
<td>13</td>
<td>.86</td>
</tr>
<tr>
<td>Factor J</td>
<td>4</td>
<td>.73</td>
</tr>
<tr>
<td>Factor K</td>
<td>4</td>
<td>.82</td>
</tr>
</tbody>
</table>

Table 2 gives the validity coefficients for predicting supervisors' ratings for the 11 factors on the NINA. These coefficients range from .289 to .025 with a median of .153.

An evaluation of these results could lead to the conclusion that the NINA is not a very valid instrument. However, the validity of home office supervisory ratings as a criterion for validity should be considered before this conclusion is drawn. It will be recalled that Jones (1967) found a significant negative correlation between ratings made in a home situation and ratings obtained from overseas respondents. It was pointed out that requirements for successful job performance may be quite different in various cultures. If this is true, then, the validity of the MINA
TABLE 2
VALIDITY COEFFICIENTS FOR PREDICTING SUPERVISORS' RATINGS ON THE MINA

<table>
<thead>
<tr>
<th>Factor</th>
<th>Validity Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor A</td>
<td>.126</td>
</tr>
<tr>
<td>Factor B</td>
<td>.153</td>
</tr>
<tr>
<td>Factor C</td>
<td>.202</td>
</tr>
<tr>
<td>Factor D</td>
<td>.191</td>
</tr>
<tr>
<td>Factor E</td>
<td>.180</td>
</tr>
<tr>
<td>Factor F</td>
<td>.289</td>
</tr>
<tr>
<td>Factor G</td>
<td>.194</td>
</tr>
<tr>
<td>Factor H</td>
<td>.034</td>
</tr>
<tr>
<td>Factor I</td>
<td>.127</td>
</tr>
<tr>
<td>Factor J</td>
<td>.039</td>
</tr>
<tr>
<td>Factor K</td>
<td>.025</td>
</tr>
</tbody>
</table>

should be examined in relation to criterion measures established in the foreign culture. In any event, the MINA is not measuring effectiveness as defined by these supervisory ratings.

Analysis of MINA and FIRO-B Profiles

Table 3 presents the mean and median rp coefficients between self and colleague profiles and between self and "Standard" or ideal profiles which were derived from scores on the MINA and FIRO-B. The individual rp coefficients for the missionaries on the two instruments appear in Appendix F and Appendix G. These mean and median coefficients are based on the rp's of 117 missionaries who completed the MINA and 126 who completed the FIRO-B.

These rp coefficients were intended to measure how
realistic the missionaries were in perceiving their personal-social-work relations by comparing their perceptions with the perceptions of others. The results on the FIRO-B, which reflect a mean coefficient of .07 and a median of .10 between self and colleagues, indicate that the missionaries are not very realistic in viewing their relations with others. They see themselves more in terms of the ideal missionary, as revealed by the mean of .27 and median of .21 on this measure.

A more favorable picture is presented when looking at the results on the MINA. The comparisons between self and colleagues yield a mean of .28 and a median of .40. These results suggest that the missionaries are assessing their life and work similarly to the way their colleagues are. However, the mean of .15 and the median of .16 between self and "Standard" indicates that their self-appraisals as measured by the MINA are not in line with the

<table>
<thead>
<tr>
<th>Category</th>
<th>Median</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mina, Self and Colleague</td>
<td>.40</td>
<td>.28</td>
</tr>
<tr>
<td>Mina, Self and Standard</td>
<td>.16</td>
<td>.15</td>
</tr>
<tr>
<td>Firo-B, Self and Colleague</td>
<td>.10</td>
<td>.07</td>
</tr>
<tr>
<td>Firo-B, Self and Standard</td>
<td>.21</td>
<td>.27</td>
</tr>
</tbody>
</table>
ideal.

In some respects the results of the $r_p$ coefficients between self and colleagues and between self and "Standard" on the MINA support the speculations made about the results of the validity measurement on the MINA. It cannot be concluded that missionaries who realistically perceive their interactions with others are therefore effective missionaries. This measure was never intended to be a sufficient condition. However, if reality perception based on comparisons between self and colleagues proves to be a better indicator of effectiveness than when it is based on self and "Standard" comparisons, it could well be because the "Standard" or ideal profile was based on ratings made by personnel in the home offices, whereas the comparisons between self and colleagues were based on data gathered in the foreign culture.

At this point, there is no way of determining whether or not a "Standard" profile developed on the basis of ratings made by overseas personnel would agree with the "Standard" used in this study. However, in terms of future investigation of criterion measures, the exploration of this question seems to be important. It would be one way of determining if there are differences in home and overseas expectations. Also, if "Standard" profiles were developed in more than one foreign culture, the issue of whether or not there are expectations that generalize across cultures could be explored.
Apart from this issue, the $r_p$ coefficient serves as one form of validity measure. The results of the self and colleague analysis indicate that for these two groups the KINA is measuring similar concepts.

Analysis of the Canonical Correlations

The canonical procedure extracted a number of latent roots from the correlation matrix, but only three were significant at the .05 level as determined by Wilks' Lambda. Table 4 shows the weights of regression equations for the three canonical vectors of the predictor variables and the corresponding canonical vectors of the criterion variables. In this table only the weights which are above .50 or below -.50 are given. The complete set of standardized weights for the predictor and criterion variables is reported in Appendix H.

The first canonical vectors were related by a coefficient of .924. Table 4 shows that the highest correlations were between "United Church of Christ of the Philippines," "United Methodist," "American Baptist," and "Lutheran" on the left side and "Number of Years of Service" on the right side.

The second canonical vectors were related by a coefficient of .873. Table 4 shows that the highest correlations on these vectors were between the denominations prior to candidacy, which include six of the seven variables on the left side, and "Factor E" on the right side.
TABLE 4

WEIGHTS OF REGRESSION EQUATIONS FOR THREE CANONICAL VECTORS OF 46 PREDICTOR VARIABLES AND THE CORRESPONDING THREE CANONICAL VECTORS OF 25 CRITERION VARIABLES

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Criterion Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vector I $R_c = .924$</strong></td>
<td></td>
</tr>
<tr>
<td>United Church of Christ of the Philippines**</td>
<td>Numbers of years of service</td>
</tr>
<tr>
<td>United Methodist**</td>
<td>.824</td>
</tr>
<tr>
<td>American Baptist**</td>
<td>.636</td>
</tr>
<tr>
<td>Lutheran**</td>
<td>.510</td>
</tr>
<tr>
<td><strong>Vector II $R_c = .873$</strong></td>
<td></td>
</tr>
<tr>
<td>Other Denominations*</td>
<td>1.346</td>
</tr>
<tr>
<td>Methodist*</td>
<td>.914</td>
</tr>
<tr>
<td>United Methodist**</td>
<td>.911</td>
</tr>
<tr>
<td>American Baptist*</td>
<td>.821</td>
</tr>
<tr>
<td>Presbyterian*</td>
<td>.799</td>
</tr>
<tr>
<td>Lutheran*</td>
<td>.699</td>
</tr>
<tr>
<td>Episcopal*</td>
<td>.525</td>
</tr>
<tr>
<td><strong>Vector III $R_c = .843$</strong></td>
<td></td>
</tr>
<tr>
<td>Methodist*</td>
<td>2.117</td>
</tr>
<tr>
<td>Lutheran*</td>
<td>1.620</td>
</tr>
<tr>
<td>Presbyterian*</td>
<td>1.229</td>
</tr>
<tr>
<td>American Baptist**</td>
<td>1.213</td>
</tr>
<tr>
<td>Evangelical United Brethren*</td>
<td>1.205</td>
</tr>
<tr>
<td>United Church of Christ of the Philippines**</td>
<td>.823</td>
</tr>
<tr>
<td>Episcopal*</td>
<td>.647</td>
</tr>
<tr>
<td>Other denominations*</td>
<td>.622</td>
</tr>
</tbody>
</table>

* Denomination prior to candidacy
**Candidates' sending board
"Factor E" refers to the missionary's philosophy of life and the way in which this philosophy affects his personal and professional activities.

The canonical correlation for the third vectors was .843. Again, most of the coefficients on the left side pertain to denomination prior to candidacy. Here, they are related to "Service Status," i.e., the missionaries from these denominations were more likely to be in active service than on leave or terminated at the time of the study.

In terms of interpreting the present data, it must be remembered that there were missing data in relation to most of the predictor and criterion variables. The procedure for handling the data produced results which can be considered only tentative. Further investigation must be done before accurate generalizations can be made.

However, the results of the canonical analysis indicate that denominations prior to candidacy or as sending boards, are the best predictors of whether or not a missionary will remain in active service for a long period of time and if he will have a philosophy of life that is conducive to successful personal and professional interactions. The findings are in line with previous concerns of the sending boards. At one point in time they tended to restrict their selection of candidates to applicants from their own denominations and to be concerned with selecting missionaries who would make this undertaking their life work.
In more recent years the areas of focus have changed and new selection procedures have been added. Several of the selection methods, such as psychological evaluations and the Missionary Orientation Center, have been instituted as recently as the past five or ten years. Since many of the missionaries who participated in this study had been in service for 20 or 30 years, it was felt that their inclusion could be obscuring the examination of the more recent methods as predictors. For this reason another canonical analysis, which only included the 73 missionaries who had entered service within the past 13 years, was conducted. The results of this analysis are shown in Table 5. The complete set of weights of the regression equations is given in Appendix I.

Examination of the results of this analysis reveals that the denominations prior to candidacy still have the highest correlations with the criterion variables. The major differences in terms of the predictor variables between this analysis and the first analysis are shown in the first canonical vectors. The categories of "Missionary Orientation Center Attendance" and "Mother, Church Member," correlate negatively with "Role Strain" and "Factor E" while "Sex" and "Psychiatric Evaluation" correlate positively with these two variables. This implies that missionaries who attend the Missionary Orientation Center and have mothers who are church members are less likely to experience role strain than missionaries who do not attend


<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Criterion Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vector I</strong> $R_c = .996$</td>
<td></td>
</tr>
<tr>
<td>Lutheran*</td>
<td>1.260 Factor E</td>
</tr>
<tr>
<td>Missionary Orientation</td>
<td>.777 Role Strain</td>
</tr>
<tr>
<td>Center Attendance</td>
<td>-.519</td>
</tr>
<tr>
<td>Woman, church member</td>
<td>.699</td>
</tr>
<tr>
<td>Methodist*</td>
<td>-.680</td>
</tr>
<tr>
<td>Sex</td>
<td>-.555</td>
</tr>
<tr>
<td>Psychiatric Evaluation</td>
<td>-.695</td>
</tr>
<tr>
<td><strong>Vector II</strong> $R_c = .990$</td>
<td></td>
</tr>
<tr>
<td>United Church of Christ of the Philippines**</td>
<td>-.603</td>
</tr>
<tr>
<td>Factor G</td>
<td>-.852</td>
</tr>
<tr>
<td>Factor I</td>
<td>-.815</td>
</tr>
<tr>
<td>Factor F</td>
<td>-.787</td>
</tr>
<tr>
<td>Problems in peer and administrative relations</td>
<td>-.570</td>
</tr>
<tr>
<td>Satisfaction with sending board</td>
<td>-.536</td>
</tr>
<tr>
<td>Factor K</td>
<td>-.523</td>
</tr>
<tr>
<td>Factor C</td>
<td>-.568</td>
</tr>
<tr>
<td><strong>Vector III</strong> $R_c = .985$</td>
<td></td>
</tr>
<tr>
<td>Methodist*</td>
<td>1.833 Service status</td>
</tr>
<tr>
<td>Other Denomination*</td>
<td>.941 Rp, FIRO-B, self</td>
</tr>
<tr>
<td>Lutheran*</td>
<td>.933 and colleague</td>
</tr>
<tr>
<td>Presbyterian*</td>
<td>.859 Factor D</td>
</tr>
<tr>
<td>Evangelical United Brethren*</td>
<td>.850</td>
</tr>
<tr>
<td>Disciples of Christ*</td>
<td>.591 Rp, NINA, self and standard</td>
</tr>
<tr>
<td>Psychological Evaluation</td>
<td>.667</td>
</tr>
<tr>
<td>Methodist*</td>
<td>-.702 Factor A</td>
</tr>
<tr>
<td>Evaluation</td>
<td>.707 MNA, supervisor</td>
</tr>
<tr>
<td>Methodist*</td>
<td>-.557</td>
</tr>
<tr>
<td>Predictor Variables</td>
<td>Criterion Variables</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Factor E</td>
<td>-.671</td>
</tr>
<tr>
<td>Factor J</td>
<td>-.679</td>
</tr>
</tbody>
</table>

* Denomination prior to candidacy
**Candidates' sending board

and whose mothers are not church members. At the same time they are less likely to have a philosophy of life that will help them to make good personal and professional adjustments. It also suggests that women experience more role strain but have philosophies of life which are more attractive to others than do men.

Missionary Orientation Center Attendance may be showing up as an important variable because of the nature of its training program. Missionaries live at the center for a period of five months and are in constant contact with other missionaries. A broad spectrum of subjects is presented, with emphasis at all times on community life. Adequate time and a variety of activities are provided to encourage the participants to interact with each other and the group as a whole. The experience serves as a transition between home and field, with elements of both in the situation. If individuals are helped to develop their capacity to cope with future difficulties, which is certainly one intent of the program, this training could
result in a greater ability to adjust to the foreign culture.

In the second set of canonical vectors "United Church of Christ of the Philippines" as a sending board correlates highly with "Factor G" (commitment to Christ), "Factor I" (adjustment to a foreign culture), "Factor F" (leadership ability), and "Factor K" (home life situation), along with "Problems in Peer and Administrative Relations" and "Satisfaction with Sending Boards." The indications are that this board has been more successful than other boards in selecting missionaries who make good adjustments as measured by these criteria. One interpretation of these results would be that for these missionaries their commitments to Christ, leadership abilities, and home life situations have helped them to adjust to the foreign culture and find satisfaction in their personal and professional relations.

In Vector III six of the denominations prior to candidacy, especially "Methodist," correlate positively with "Service Status," "r_p, FIRO-B, Self and Colleague," "Factor D" (openness to changes in people and social situations), and "Completion of Term" but correlates negatively with "r_p, MINA, Self and Standard." Within this particular relation, it seems that these six denominations are good predictors for candidates who will remain in service, will see themselves the way their colleagues will see them, and will be open to changes in people and social situations.
On the other hand, this type of openness and self-perception is not compatible with a perception of self as an ideal missionary.

Within Vector IV "Methodist," as a denomination prior to candidacy, is positively correlated with the supervisors' ratings on the MNA and Factors E and J, which describe an individual's philosophy of life as it affects his personal and professional relations and his concern with people with special needs, such as the poor and the handicapped. A negative correlation is shown between "Methodist" and "Factor A," which describes a person who is very understanding and accepting of people and ideas. It seems that the relation expressed between the variables in this vector deals with a sympathetic concern, measured by Factors E and J, versus an empathic concern for others, measured by Factor A.

The fourth vector also shows that "Psychological Evaluation" correlates positively with "Factor A" but negatively with the other three criterion variables in this vector. It is difficult to interpret this relation since the category "Psychological Evaluation" simply indicates whether or not a missionary had a psychological evaluation. "Psychological Recommendation," a category which was intended to discriminate between the missionaries who were accepted with reservations and those who were accepted without reservations concerning their adjustment to missionary work, did not correlate significantly with any of the cri-
criterion variables. It may be that a screening process occurred on the basis of the psychological examinations and resulted in differences between those who had the examinations and those who did not, but that the examinations were ineffective in making finer discriminations.

Twelve of the 13 criterion variables having high correlations with predictor variables in this second analysis involved the MNA. It seems from these results that the behavioral attributes measured by this instrument are important criterion variables.

A shortcoming of the two canonical analyses in this study concerns the omission of an index developed by Stewart and Love (1968) to measure the redundancy or the shared variance in one set of variables when given the other set of variables. The index is a way of determining if a given root or canonical variate contributes sufficiently to the canonical structure to warrant its inclusion in the structure, as well as indicating the total amount of overlap between the two sets of variables with the canonical structure. Without this index overgeneralizations can occur.
CONCLUSIONS

This study basically consisted of two parts: establishing criterion measures of effective missionary performance and finding predictors of these criteria. Previous research has pointed to the necessity of deriving criterion measures of effective overseas performance on the basis of information gathered in the foreign culture. The present study attempted to achieve this purpose through extensive data collection in the Philippines. The data from the Philippines were combined with information secured from the home offices of the various denominations participating in the study. The combined data resulted in 25 criterion measures.

The effort to develop criterion measures was only partially successful. For the most part the criterion variables have low correlations with the predictor variables and with other criterion variables. These low correlations may have occurred because many of the criterion variables are measuring independent aspects of missionary performance. If this is true and if the various aspects are important to the measurement of missionary performance, the heterogeneity among the measures is desirable. However, in many instances the missionaries considered to be most effective when using one criterion were totally unrelated to the most effective missionaries selected with another criterion. With these results it is difficult to isolate the most useful criteria.
It is strongly felt that much of the difficulty relates to the procedures used in developing the criteria. Although a considerable amount of time was spent in gathering criterion information in the Philippines, a number of the variables were selected on an a priori basis and were not validated for the foreign culture.

The most promising aspect of this study relates to the development of the MINA. Its construction included the combined efforts of foreign and home office personnel, and it was given an extensive tryout in the Philippines. The results of these efforts suggest that the MINA is a useful tool in measuring certain behavioral attributes and, in turn, suggest the importance of these behavioral attributes as criterion measures.

It is recognized that the results derived from the use of the MINA are tentative and must be replicated in independent studies in order to be interpreted with confidence. It is also recognized that revisions of the instrument are needed. However, the development of any measurement instrument is a long and arduous task. When the process is begun with very little information to build on, as was true in the development of the MINA, the difficulties are accentuated. The present efforts represent only the beginning phases of the construction process, but they do provide a rationale for continuing the process.

The second purpose of this study was to find predictors of the criterion variables. The major results show
that certain sending boards have been more effective than others in selecting missionaries that meet the defined criteria. However, this study failed to isolate the selection procedures which led to their decisions. Further work with these boards is needed in order to determine the variables which receive the most emphasis.

Overall, the study points to the importance of further investigation of the criterion measures. As has been repeatedly shown in previous research, it is difficult, if not impossible, to develop selection procedures without clearly defined performance criteria. On the other hand, this study has made progress in that direction.
REFERENCES


dissertation, Boston University, 1969.


APPENDICES
RESEARCH DESIGN FOR EVALUATING THE EFFECTIVENESS OF
SEVERAL PREDICTORS OF ACCEPTANCE FOR AND SUCCESS IN
THE CHRISTIAN MISSIONARY
ENTERPRISE

Ralph Mason Droger, Ph.D., Coordinator

STATEMENT OF PURPOSE

From time to time philosophical and empirical evaluations have been made of the overall effectiveness of the Christian missionary enterprise (Anderson, 1946; Commission, 1932; Latourette, 1938; Schweitzer, 1923; World, 1939). As far as is known, however, no one has undertaken the type of empirical investigation outlined in the succeeding pages. It is a less ambitious evaluation program than one which would assess the entire sweep of Christian missions. Nevertheless, the scope of the present suggested investigation is only somewhat less than vast, touching upon the larger issues in many places.

Psychologists have regularly been concerned about the effectiveness of their evaluation procedures for any enterprise. It is natural, therefore, that those who have assisted in the selection of candidates for the mission field should be vitally interested in assessing the effectiveness of their own and others' methods which are used by Mission Boards for help in selecting candidates.

In pursuance of this purpose a group of Missionary Personnel Secretaries and psychologists met in conference on
December 2 and 3, 1966 (Consultation, 1966). Out of the semi-structured discussion came the recognition that assessing the effectiveness of psychological evaluations (including psychiatric) is only part of the overall problem of determining the effectiveness of the selection procedure as a whole. And indeed, the problem was seen to be embedded in the even larger one of the effectiveness of the Christian missionary enterprise as a whole.

From the notes of the far-ranging reconnoitering of the subject (Consultation, 1966) emerged the outlines of a research design to deal practically with the many variables involved, either to assume them to be constant, to measure them by objective techniques, or to quantify them by the ratings of expert judges. As a first step in designing the research to evaluate the effectiveness of evaluations, the following list of variables or groups of variables was set down, as culled from the above-mentioned conference. The first group of variables can roughly be called "predictor variables," and the second "criterion variables."

**Predictor Variables**

1. Effectiveness of missionary enterprise. For the purpose of this research this very complex variable is assumed to be constant. It is certainly the most important factor of all; but this investigation remains within the limits of acceptance of the value and effectiveness of missions.
2. Differential aims of individual Mission Boards. "Liberal," "conservative," or middle-of-the-road Boards may differ widely in the purposes they have in view. It is assumed here that despite these differential aims Missionary Personnel Secretaries and field personnel can agree on the meaning of "effectiveness of a missionary." The various personal and social measures described below presumably assess this latter (complex) variable. The assumptions involved in by-passing the larger issue of differential aims and in supposing that missionary effectiveness can be assessed apart from direct dealing with this larger issue may be demonstrably false. If missionary authorities cannot agree on ratings of missionary effectiveness, part at least of the research will be vitiated.

3. Denomination. Though differential aims of various denominations are not assessed, the fact of a candidate's or established missionary's denominational affiliation can be recorded. Indirectly the philosophy of particular Mission Boards may be reflected in the association of a denomination with certain types of effectiveness. However, it is hoped that the criteria for the latter can be general enough that nothing like "invidious comparisons" among denominations can be made. If this hope is borne out, and the assumptions of #2 above are adequate, Boards should be able to evaluate their own internal strengths and weaknesses, but no Board will be able to claim overall superior effectiveness.
4. Presence of psychological and/or psychiatric evaluation. It is possible that some cooperating Boards are not now fully using psychological evaluation. (Psychiatric evaluation may be regarded, except where appropriately separable, as one form of psychological evaluation.) These denominations may or may not have formerly used such procedures. All Boards presumably maintain records from the period prior to utilization of psychological aids. Sufficient data must be available from these sources to make comparisons with data derived from candidates who have been evaluated psychologically.

5. Type of psychological evaluation. Here psychological and psychiatric evaluations are separable. "Psychological" and "a psychiatric" need to be kept distinct. Within the former the presence or absence of tests and/or interviews needs to be taken account of; and in the case of the use of tests at least the major tests included in the battery should be delineated, if possible. Within the psychiatric evaluation the use of a mental status examination and/or history should be noted. Those cases having both psychiatric and psychological evaluations must be distinguished from others having one or the other.

6. Type of candidate. Temporary service and permanent service applicants should be separated for analyses.

7. Psychological recommendation. Some recommendations are withheld. Some are given without reservation, some are given with mild reservations, and some with serious reserva-
tions. Provision needs to be made for the type of recommendation made.

8. Appraisals by endorsers. All Boards require letters of recommendation from colleagues or superiors. If these are in standard form (Joint, n.d.), it is fairly easy to judge what degree from "inferior" to "superior" these recommendations present. With qualitatively expressed opinions judgments will have to be made by home office personnel as to the degree of acceptability of the candidate reflected in the letters.

9. Marital status. Whether the individual was married at the time of entry into service, divorced or separated, and whether he has remained married or incurred separation must be taken account of, as well as whether or not he has been married during his term of service.

10. Parent status. How many children, if any, a missionary has at the beginning of his initial term of service, and how many if any he acquires during his period of service may have a bearing on his effectiveness. These facts can fairly easily be obtained for inclusion in the analyses.

11. Traumatic loss experiences. When a young adult loses a parent or a parent loses a child or a spouse loses a mate, there is presumably a shock that can seriously affect missionary effectiveness, though wide individual differences may be expected. Nevertheless, if the information is available, it should be incorporated as factual data.
12. Ecclesiastical status. Some authorities expressed the need to distinguish lay from clerical candidates.

13. Type of acceptance or rejection. Some candidates are accepted directly and immediately upon completion of selection procedures. Other are deferred by boards for various reasons. Still others are rejected. Some may be accepted but withdraw before they undertake any service. Of special interest to those who make such recommendations is a group of candidates who have been requested to undergo psychotherapy; their subsequent acceptance-rejection status or voluntary withdrawal is important.

14. Family background. The conferees felt that a doctoral dissertation could be devoted to ascertaining the relation between family background variables and missionary success. However, for the sake of this investigation some attention must be paid to the relation of the candidate's family of orientation to his later performance as a missionary. Accordingly, the parents' marital status, presence or absence of parents in the home, gross religious practices, and presence or absence of chronic alcoholism are considered important. Likewise, the number of sibs should be recorded and the candidate's ordinal position, a variable to which renewed attention has been given in recent years. It might be difficult to predict what effect the high or low socioeconomic status of the family from which the missionary comes has on his usefulness as a missionary. Yet, from what is known of the influence of such status on
other aspects of performance, it seems necessary to include this complex of factors at least in rough gradations.*

Several exceedingly important background variables were not specifically discussed by the conferees, probably because they are so omnipresent everyone assumed their importance without feeling a need to discuss them. The following three are included at this point among other background variables.

15. Age, at time of candidacy. The age at which a missionary candidate volunteers for service seems to be a consideration that should not be overlooked.

16. Sex. Whether the demands of selection and/or service affect the sexes differentially or not should be known.

17. Race. Although most likely the large majority of missionary candidates are Caucasian, the racial or ethnic status should be considered.

Conditions of the field and of the service itself constitute relevant variables.

18. Cultural stress. World and national conditions are relevant to the missionary enterprise. Since the measurement of world conditions seems to be a task of inordinate magnitude, the cultural stress associated with particular locales will be rated rather than the much more difficult general conditions. This task will be difficult enough, but should not be impossible for Missionary Personnel Secretaries and others with knowledge of comparative conditions.

*Using the adaptation of Warner's scales (McGuire & White, 1955).
Once more, however, we cannot ignore the possibility that a major set of variables presumably held constant by assumption may influence differentially and thus introduce sufficient variance to invalidate conclusions.

19. Location of field. If the Boards of missions wish to make comparisons of candidates who serve in home and foreign fields, the distinction can easily be made according to Board technical organization charts.

20. Type of service environment. The U.S. general culture can serve as a base for relating types of service environment, first by regarding the gross distinction between U.S. deprived locations and U.S. non-deprived locations, then by rating other cultures according to their similarity to the major U.S. culture. Again, though a difficult task, such rating is not impossible for knowledgeable persons.

21. Demography of service environment. Whether the service location is rural or semi-rural on the one hand or urban on the other hand and if the latter whether large or small in terms of population has some bearing on the kind of service, hence possibly on the effectiveness of service, and should be considered in the plan of investigation.

22. Type of service. A missionary can be in a supervisory capacity and have few or many persons in his charge. Or possibly in some cases he may have so few supervisory duties that he may be classed as nonsupervisory. These factors can be recorded objectively.
23. Area of specialization. It is recognized that a missionary may have to be a "Jack of all trades." Yet he may also be primarily an educator, a physician, a pastor, or other specialized personnel. The category of his primary designation should be indicated.

Criterion Variables

The variables listed thus far can be regarded as "predictor variables" or, loosely, independent variables in the sense that they are logically antecedent or chronologically prior to the service undertaken or have an effect some way on effectiveness. The variables listed below may be classified as "criterion variables" or dependent variables, inasmuch as they are measures of effectiveness, which is the major area of concern to which logically antecedent variables are to be related.

24. Length of service. The length of time the missionary spends on the field may be considered either a dependent or an independent variable, for effectiveness either may be increased by (or decreased by) length of service or may be an index of effectiveness in itself. In this case it is judged to be primarily the latter and is so treated.

25. Terminal status. The present employment situation or the situation as it existed at the time of termination of service can be assessed. If a missionary is still serving, he may grossly be regarded as having a good record or a
doubtful record in the judgment of the Missionary Personnel Secretaries of his denomination. If termination of service has already taken place, the condition of termination, voluntary or involuntary, can be recorded, and the major bases for involuntary termination indicated.

26. Health and related areas. Diagnosed physical and/or emotional breakdowns can be determined from the records, as can chronic health problems and major accidents.

27. Personal-social orientation. This is an area calling for the best and most appropriate objective measures of an individual's own self-judgments with those of knowledgeable others on the type of person the missionary has proved himself to be. The conferees judged that whatever other measures of effectiveness reveal as to the accomplishments of the individual, some assessment of his reality perception in personal-social orientation must be made.

A survey of the field of validated instruments for assessing personal-social relations (Laing, 1966; Masserman and Palmer, 1961; Shaw and Wright, 1967; Stern, et al., 1956), tests which could be used by lay (i.e., non-psychologically trained) judges, which could be responded to relatively easily and quickly, and would lend themselves to meaningful comparisons of an individual's responses with knowledgeable others' responses, revealed three outstanding contenders, Leary's Interpersonal Check List (Leary, 1957; Leary and Coffey, 1955), Lorr and McNair's Interpersonal Behavior Inventory (Lorr, 1967; Lorr and McNair, 1963, 1966),
and Schutz' FIRO-B (Fundamental Interpersonal Relations Orientation-Behavior) (Schutz, 1966). The MMPI and 16PF were considered; but both from a time standpoint and demands on others to make very personal judgments of an individual's thoughts and feelings (in the former case amounting to psychiatric judgments), they were eliminated. Leary's instrument has not had adequate work done on it since its introduction in the fifties, though it has been utilized by others in further developments. Lorr and McNair's IBI is probably the most adequately developed set of scales; it is, however, longer than FIRO-B and has more categories or scales to be compared, so it does not meet the needs of the investigation as well as does FIRO-B. The latter is well-standardized, far better than most attitude-type scales, takes only about 15 minutes to administer, and yields six Guttman-type scales with relatively unequivocal scores. In addition, FIRO-B contains comparatively innocuous items which call for less "faking" than do some other types of items.

Since the FIRO-B does give six scores which if taken separately would add undue complexity to the analysis and interpretation of comparisons, it is proposed that the six scores be treated as a profile in the areas of inclusion, control, and affection (in expressed behavior and behavior wanted from others; three need areas x two directions = six scores), which Schutz regards as the basic dimensions of personal-social orientation. The profile derived from the
individual himself can be compared with the average profile derived from two other persons who know the individual well. Among the methods of profile comparison (Cattell, 1957; Cronbach and Gleser, 1953; Haggard, 1958; Nunnally, 1962; Osgood and Suci, 1952) Cattell's rp, the pattern similarity coefficient (Cattell, 1949) seems the most adequate for the purpose here. It takes account not only of the pattern or shape of the profile, but also of the general level and scatter or deviations. The suggestion is made that persons be dichotomized at the .30 rp level, rp>.30 and rp<.30. This correlation coefficient of .30 represents a difference between profiles of an average of just slightly more than 1.0 (on a 10-point scale such as used in FIRO-B). (For comparison purposes a coefficient of .45 represents an average difference of .976, and one of .56 an average difference of .833.) If the agreement levels differ substantially from a median of .30, it is then recommended that the median obtained rp be used as the cutting point.

In order not to make the measurement of this very important area of reality perception in personal-social orientation depend solely on one instrument, however adequate it may be, the further suggestion arising from the conference is that Stephenson's Q-sort method (Block, 1961) be utilized for comparing the judgments of the individual about himself with those of his confreres. Block has developed the Q-sort farther than anyone else, and has designed a "Q-set" of 100 items which constitute what he calls a
"Basic English" for the description of personality. This Q-set is not quite basic enough English for the use of lay persons in psychology or psychiatry, so those items which appear to need "translating" into layman's language have been rendered more "basic." Block has constructed an adjective Q-set for the non-professional sorter; but the terms require more of a judgmental frame of reference than do the more behaviorally-oriented regular Q-set (and their translations for this project). Again, an average of two other respondents can be compared with the individual's own distribution. An especially-constructed correlation coefficient (called $r_g$ here), designed by Block, can be employed. A coefficient of .50 or more, on the basis of Block's discussion of reliability (Block, 1960), seems to be a good index of similarity of judgments. Parallel to the use of $r_p$, however, the actual distribution of $r_g$'s could be dichotomized and the individual $r_g$'s compared with the median $r_g$.

28. Effectiveness, personal-social orientation. Since the measures discussed immediately above relate to effectiveness as a missionary only indirectly, more direct assessment of effectiveness as a missionary needs to be undertaken. The first such measure suggested is a comparison between the individual's self-judgments on the FIRO-B and on a Q-set with a "standard" FIRO-B profile and a "standard" Q-sort, each representing an "ideal missionary." The "standards" should come as an average of at least eight
Missionary Personnel Secretaries or others with a wide knowledge of missionary fields and conditions. The .30 or median $r_p$ can also be employed for the FIRO-B profiles. In the case of the Q-sorts a coefficient of .30 would be an acceptable cutting point in terms of reliability, or the median $r_g$ criterion could be used.

29. Effectiveness, Missionary Personnel staff rating.
One of the major criteria discussed by the conferees was the judgments made by Missionary Personnel Secretaries of the effectiveness of the missionary in the field. In order to make these judgments more objective and comprehensive, a Missionary Adjustment Scale is to be developed, along the following lines.

Among considerations in constructing the Missionary Adjustment Scale is a major concern voiced by the conferees, that not merely "psychological adjustment" be utilized as a criterion (or set of criteria) of effectiveness of missionary service. Surely, freedom from psychotic manifestations, and in most cases freedom from neuroticisms of a debilitating nature should be regarded as potential evidence of the ability to "take it" on the field. But sometimes, conferees averred, successful missionary efforts can be measured by the degree to which the missionary fails to adjust to the society in which he serves. In such cases the appearance of what would ordinarily in psychiatric terms be regarded as maladjustive behavior, even including neurotic symptoms (and in rare instances, psychotic symptoms) could be judged as a
mark of an effective missionary. Further, the "adjustment" of a missionary may mean failure to exercise creative, original, unconventional thought processes or inability to innovate or execute unusual but potentially effective procedures, so that such "adjustment" could be considered ineffectiveness rather than effectiveness. Items on the Scale have been devised to assess both the capacity for psychological adjustment under appropriate circumstances and capacity for "maladjustment" under appropriate circumstances, as well as creativity and originality as measures of effectiveness (Allport, 1937; Dreger, 1962; Maslow, 1954; Stern, et al., 1956; Williams, 1961).

The principles of construction of the Missionary Adjustment Scale are as follows: Items should be derived from a variety of sources, beginning with the wide range of suggestions at the conference of consultants who expressed many specifics relating to missionary effectiveness. Supplementing these suggestions are others representing more general effectiveness as a person in social situations, especially a creative, independent, but ordinarily non-irritating person. The total pool is to consist of about 100 items. These will be subjected to revision, deletion, and/or addition by experts in the missionary enterprise. At least five experts will be necessary to achieve adequate validity in terms of content, criteria, and construct (missionary effectiveness) (American, 1966). To objectify further the validity and obtain estimates of reliability of the scale
(Kristof, 1962), it will have to be administered twice with a month's interval to a sample of respondents on the field, responding on behalf of colleagues or supervisees. This sample cannot be very large, possibly not more than 50, inasmuch as the total population of potential respondents is relatively limited. Because of the sample size factor-analytic approaches (Cattell and Tsujioka, 1964; Guilford, 1954) to validity and reliability are precluded. Instead, an item composite approach (Guilford, 1954; Horst, 1966; Solomon, 1961) can be used to assess reliabilities, both in terms of consistency and stability; validities will have to stand on the expert judgments mentioned above. Again, because of limitations of population size, cross-validation will not be possible, so that the descriptive statistics derived from the sample will have to suffice. Items can, however, be selected on the basis of these statistics, hopefully keeping the representativeness of the items, in such a way as to maximize variance and produce an instrument approximating a normal curve. Division at the mean (and median) can then be made to separate missionaries into more and less "successful" in terms of the revised Missionary Adjustment Scale.

30. Effectiveness, supervisor rating. One form of objective rating of effectiveness proposed at the conference was that obtained by participation of each missionary's immediate supervisor. The Missionary Adjustment Scale can be used for this purpose. Again, the group can be dichoto-
mized on the basis of the above standardization into more and less effective as judged by supervisors.

31. Effectiveness, consultant rating. Another type of objective rating proposed was that which could be obtained by site visits by participating psychologists and psychiatrists. The Missionary Adjustment Scale can be the measuring instrument here, too. It may be impracticable for teams of consultants to visit every missionary on the field. Consequently, it is suggested that a stratified random sample of missionaries be selected, using stratification(s) determined by Missionary Personnel Secretaries to assure adequate sampling of missionaries from different fields, cultures, denominations, and other strata of importance. Consultants would use any means at hand, including as a sine qua non interviews with the individuals to be assessed, as bases for scoring the Missionary Adjustment Scale. Presumably, as in the case of the first two effectiveness ratings, consultants' scoring will not be independent of supervisors' judgments. But psychologically trained observers should be qualified to extract independent judgments to a degree that provides a partly autonomous estimate of effectiveness.

**Treatment of the Data**

Like Thor in the hall of the giants, the investigators of effectiveness of psychological evaluations in the selection of missionary candidates find they cannot lift the leg of the cat without of necessity also lifting the Serpent of
Midgard which engirdles the earth. To take seriously the evaluation of psychological evaluations means to take account of every other major form of evaluation and other major influences of background and foreground which affect the multiple criterion, "missionary effectiveness." It must not be forgotten, though, that the impetus for instituting an investigation at all was the desire to determine what if any "incremental validity" psychological evaluations possess. On the other hand, it cannot be forgotten that such validity cannot be assessed in isolation. Accordingly, a foregone conclusion is that multivariate procedures must be employed which take into account the interrelations among both the predictor and the dependent variables.

Grossly, the analysis of data suggested here incorporates the following:

1. Hotelling's canonical correlation (Anderson, 1966; Cooley and Lohnes, 1962) for determining the relation between a set of predictor variables and a set of criterion variables can be utilized to estimate the relations between all of the presently designated predictors and all of the criteria. Whether Horst's generalized canonical correlation approach (Horst, 1961a, b) is preferable to the simpler Hotelling approach, with successive correlations and weights for subsets of predictors and criteria, is not clear at this time. In either case gathering of the data would be exactly the same. Tests of significance exist for assessing the reality of the correlations derived (Cooley and Lohnes, 1962).
2. It may be advantageous to employ the canonical correlation procedure to determine the relations between only the entire set of selection variables and the entire set of effectiveness measures, including those classed under "Personal-social orientation." Then the relation between successive subsets of selection procedures, with special attention to the psychological evaluations, and successive sets of effectiveness criteria can be ascertained. This second analysis envisions the use of Hotelling’s procedure rather than Horst’s generalized procedure.

3. It may also be advantageous for each sub-variable under the rubric "Psychological evaluation" to be included progressively in a multiple regression equation (Efroymson, 1960; Guilford, 1956) for the prediction of each single criterion variable, using varying combinations of psychological evaluation predictor variables. The most efficient combinations of evaluation predictors for specific criteria can be thus ascertained.

4. Although the steps involved in #1, #2, and #3 yield considerable information, the interrelations among individual variables is partly obscured. Therefore, a factor analysis among all variables is recommended to determine what place if any each of the variables has among all the others, and the relative strength of its contribution to a particular factor. The dimensions of missionary selection and effectiveness should be revealed by such an analysis. A principal components analysis with the squared multiple
correlation coefficients in the diagonal cells is suggested (Harman, 1960). Varimax rotation of factors with eigenvalues of 1,000 or more, and rotation to simple structure by the Promax (Hendrickson and White, 1964; Pruzek and Coffman, 1966) or Maxplane procedure (Cattell and Muerle, 1960), can be carried out.

Specifically, the variables are to be broken down in the following manner. All will be scored on a "Yes-No" basis so that there can be a uniform use of either the Pearson $r$ or its equivalent, depending on the computer program employed, and probably more important that the basically quantitative and the basically qualitative variables can be reduced to essentially the same type of dichotomies.

A. Denomination (specify)
   1.
   2.
   3.
   4.
   Etc. (numbers up to 10)

B. Presence of psychological (and/or psychiatric) evaluation
   11. Psychological evaluation employed*

C. Type of psychological evaluation
   12. Psychological evaluation only
   13. Psychiatric evaluation only

* If #11 is "No," C and E are not scored.
14. Both psychological and psychiatric evaluation
15. Psychiatric evaluation, interview only
16. Psychiatric evaluation, interview plus history (only)
17. Psychiatric evaluation, interview plus mental status examination (only)
18. Psychiatric evaluation, interview plus history and mental status examination
19. Psychiatric evaluation, undetermined content
20. Psychological evaluation, interview only
21. Psychological evaluation, tests only
22. Psychological evaluation, both interview and tests
23. Psychological evaluation, undetermined content
24. Psychological evaluation, including Rorschach
25. Psychological evaluation, including TAT
26. Psychological evaluation, including figure drawings
27. Psychological evaluation, including incomplete sentences
28. Psychological evaluation, including WAIS or equivalent
29. Psychological evaluation, including Ohio State University Psychological Examination
30. Psychological evaluation, including Bernreuter
31. Psychological evaluation, including 16PF
32. Psychological evaluation, including GZTS or other Guilford test
33. Psychological evaluation, including EPPS
34. Psychological evaluation, including MMPI
35. Psychological evaluation, including Kuder
36. Psychological evaluation, including SVIB
D. Type of candidacy
   37. Temporary service
   38. Permanent service

E. Psychological recommendation
   39. Recommended for service
   40. Recommended without reservation
   41. Recommended with mild reservations
   42. Recommended with serious reservations

F. Appraisals by endorsers
   43. All "superior" range
   44. All "good" range
   45. All "inferior" range
   46. Some "superior," some "good," or "inferior range

G. Marital status
   47. Married at beginning of candidacy
   48. Married at termination of candidacy
   49. Accepted for service, married at beginning of first term
   50. Divorced or separated at beginning of candidacy and/or beginning of first term
   51. Married during service
   52. Divorced or separated during service

H. Parent status
   53. Number of children at beginning of candidacy and/or first term: 0
   54. Number of children at beginning of candidacy and/or first term: 1 or 2
   55. Number of children at beginning of candidacy and/or first term: 3 or more
56. Accepted for service, number of children born during service: 0
57. Accepted for service, number of children born during service: 1 or 2
58. Accepted for service, number of children born during service: 3 or more

I. Traumatic loss experiences
59. Missionary under 30 CA, loss of parent
60. Missionary under 30 CA, loss of spouse
61. Missionary under 30 CA, loss of child
62. Missionary 30 or over CA, loss of spouse
63. Missionary 30 or over CA, loss of child

J. Ecclesiastical status
64. Lay
65. Clerical

K. Type of acceptance or rejection
66. Accepted
67. Accepted unconditionally
68. Accepted but deferred, miscellaneous reasons
69. Accepted but deferred for psychotherapy
70. Accepted but deferred for psychotherapy and accepted unconditionally following psychotherapy
71. Accepted but deferred, miscellaneous reasons, and accepted unconditionally following deferment
72. Accepted unconditionally, but voluntarily withdrew before service

L. Family background
73. Unusual conditions: second marriage; grandparents or other relatives in loco parentis; orphanage-reared, etc.
74. Family intact (both parents at least) during most of childhood

75. Family intact through most of adolescence

76. Parents married or separated only by death at beginning of candidacy and/or first term

77. Father chronic heavy drinker for most of candidate's childhood

78. Mother chronic heavy drinker for most of candidate's childhood

79. Candidate only child

80. Candidate eldest child

81. Candidate middle child

82. Candidate youngest child

83. Number of sibs: 1 or 2

84. Number of sibs: 3 or more

85. Socioeconomic status: Lower SE class @

86. Socioeconomic status: Lower middle SE class @

87. Socioeconomic status: Upper middle SE class @

88. Socioeconomic status: Upper SE class @

M. Age, at time of candidacy

89. Below 20

90. 20-24

91. 25-29

92. 30-34

93. 35-39

94. 40 and older

@ McGuire-White (1955) Index of Social Status: #85 - Levels 5, 6, and 7; #86 - Levels 3 and 4; #87 - Level 2; #88 - Level 1.
N. Sex
   95. Male
   96. Female

O. Race
   97. White
   98. Nonwhite

P. Cultural stress
   99. Moderate
   100. Severe
   101. Very severe

Q. Location of field
   102. Home
   103. Foreign

R. Type of service environment
   104. U.S. deprived
   105. U.S. non-deprived
   106. Foreign, very similar to U.S.
   107. Foreign, somewhat similar to U.S.
   108. Foreign, somewhat dissimilar to U.S.
   109. Foreign, very dissimilar to U.S.

S. Demography of service environment
   110. Rural or semi-rural
   111. Urban (5,000 to 24,999)
   112. Urban (25,000 to 99,999)
   113. Urban (100,000 to 499,999)
   114. Urban (500,000 and over)

T. Type of service
115. Non-supervisory
116. Supervisory (two to four people)
117. Supervisory (five to nine people)
118. Supervisory (10 or more people)

U. Area of specialization (primary)
119. Educational
120. Pastoral
121. Medical
122. Agricultural
123. Other

A'. Length of service
124. Under six months
125. More than six months but under one year
126. One year or more but under three years
127. Three years or more but under six years
128. Six years or more but under 12 years
129. Twelve years or more but under 18 years
130. Eighteen years and more

B'. Terminal status
131. Presently in service, good record
132. Presently in service, doubtful record
133. Terminated by request (physical or emotional health, dereliction, etc.)
134. Voluntary withdrawal
135. Terminated for other reasons

C'. Health and related areas
136. Diagnosed physical breakdown
137. Diagnosed emotional breakdown
138. Chronic health problems
139. Major accident(s)

D'. Personal-social orientation

140. \( r_p > .30 \) (or above median), \( \text{FIRO-B} \), six scales, Self and average of two other respondents

141. \( r_g > .50 \) (or above median), Q-sort, Self and average of two other respondents

E'. Effectiveness, personal-social orientation

142. \( r_p > .30 \) (or above median), \( \text{FIRO-B} \), six scales, Self and "standard" profile

143. \( r_g > .30 \) (or above median), Q-sort, Self and "standard" Q-sort

F'. Effectiveness, Missionary Personal staff rating

144. At mean or above, Missionary Adjustment Scale

G'. Effectiveness, supervisor rating

145. At mean or above, Missionary Adjustment Scale

H'. Effectiveness, consultant rating @

146. At mean or above, Missionary Adjustment Scale

@ For stratified random sample.
EVALUATING THE EFFECTIVENESS OF SEVERAL PREDICTORS OF ACCEPTANCE FOR AND SUCCESS IN THE CHRISTIAN MISSIONARY ENTERPRISE

Revised Listing of Variables, April 2, 1970

(All variables #1-#71 are to be considered as of the beginning of candidacy which is defined as the time when the candidate is beginning to focus on a position and has made an active submission of his final application papers.)

Predictor Variables

A. Denomination prior to the beginning of candidacy
   1. (Here it is necessary to specify denomination.)
   2. Code: 0 = another denomination than one specified
   3. by number.
   (Numbers up to 20)

AA. Candidate's sending Board
   21. (Here it is necessary to specify denomination.)
   22. Code: 0 = another denomination than one specified
   23. by number. 1 = specified denomination
   (Numbers up to 30)

B. Psychological evaluation
   31. Code: 0 = no evaluation; 1 = objective tests only;
   2 = objective and projective tests used

C. Psychiatric evaluation
   32. Code: 0 = no evaluation; 1 = evaluation reported

D. Type of service  Code: 0 - not applicable;
   1 = applicable
   33. Short term (2-3 years)
   34. Regular term (4-5 years)
   35. Career (2 terms or more )
   36. Other (special)

E. Psychological and/or psychiatric recommendation
   37. Psychological recommendation (if #31 is 0, omit #37)
   Code: 1 = not recommended; 2 = recommended with
   serious reservations; 3 = recommended with
   mild reservations; 4 = recommended without
   reservations.
   38. Psychiatric recommendation (if #32 is 0, omit #38)
   Code: (Same as #37)

F. Appraisals by endorsers: Content
39. Code: 1 = mostly inferior; 2 = mostly mediocre (average); 3 = complete mix; 4 = mostly superior; 5 = all superior

G. Record of Personnel Secretaries' judgment based on review of materials and/or interview
40. Code: 0 = Record not available; 1 = negative; 2 = doubtful; 3 = affirmative

GG. 41. Code: Standard score on MLAT

H. Involvement in campus life
42. Code: 0 = no record of membership in significant campus organizations; 1 = record of membership in significant campus organizations; 2 = officer in significant campus organizations

I. Involvement in church life (as judged from records)
43. Code: 1 = ordinary membership, no offices held, classes taught, or other leadership activities; 2 = some responsibilities, teacher of class, officer of class or church, etc., indicating some leadership activities; 3 = very active involvement, many offices and leadership activities

J. Marital status (if #44 is 0, omit #45 and #46)
44. Code: 0 = not married; 1 = married

45. Code: 0 = married, no record of married stress; 1 = married, record of marital stress

46. Code: Age at first marriage

K. Parent status (if #44 is 0, omit #47-50) (if #47 is 0, omit #48-50)
47. Code: 0 = married, without children; 1 = married, with children; 2 = married with adopted children

48. Code: Number of children, beginning with 1

49. Age range of children (choose most applicable range)
   1 = 0-5; 2 = 0-12; 3 = 0-18; 4 = 0-19+; 5 = 6-12; 6 = 6-18; 7 = 6-19+; 8 = 13-18; 9 = 13-19+; 10 = 19+

50. Sex of children
   Code: 1 = all or mostly male; 2 = equal number of male and female; 3 = all or mostly female

L. Traumatic loss experience prior to the beginning of candidacy
51. Code: 0 = no record of such loss experience; 1 = record of one or more such losses

M. Degree status and academic standing
52. Code: 1 = less than bachelor's degree; 2 = bachelor's degree (except BD, LIB, STB) or RN without degree; 3 = master's degree (MA or MS); 4 = BD, STB, STM, MTh; 5 = doctor's degree

N. Ecclesiastical status
53. Code: 0 = has not functioned as professional religious person; 1 = has had training as or has functioned as professional religious person, but has not been ordained; 2 = ordained

O. Type of acceptance
54. Code: 1 = accepted with significant reservations; 2 = accepted with mild reservations; 3 = accepted with confidence

P. Family background
55. Code: 0 = no record of diagnosed emotional breakdown in parent (s); 1 = record of such.
56. Code: 0 = no record of alcohol problems in parent (s); 1 = record of such
57. Code: 0 = no record of divorce in parent (s); 1 = record of such
58. Code: 0 = no record of candidate's having been reared by others than natural parents; 1 = record of such
59. Code: 0 = no record of boarding school experience; 1 = record of such
60. Code: 0 = no record of having step parent (s); 1 = record of such
61. Code: 0 = parents not missionaries; 1 = parents missionaries
62. Code: Socioeconomic status of parents; Index of Social Status (McGuire-White scale), average of three scales; code: 1 = high status; ...
63. Code: 0 = father not ordained minister; 1 = father ordained minister
64. Code: 0 = father or mother not religious worker; 1 = father or mother religious worker other than ordained minister
65. Code: 0 = father not member of church; 1 = father member of church
66. Code: 0 = mother not member of church; 1 = mother member of a church

Q. Age
67. Code: Chronological age in years at time of application

R. Race
68. Code: 0 = Caucasian; 1 = non-Caucasian

S. Sex
69. Code: 0 = male; 1 = female

T. Cultural stress (defined as: through high school belonged to group discriminated against in his community).
70. Code: 0 = none; 1 = possible; 2 = yes

U. Personal philosophy and action
71. Involvement in social change activities (tutoring, community organization, ghetto work, peace protests, etc.)
Code: 0 = no record of activities; 1 = record of some activities; 2 = much involved

72. Theological stance
Code: 1 = literalistic, fundamentalist; 2 = conservative; 3 = liberal evangelical, social orientation; 4 = humanistic, social orientation dominant

V. Missionary goals
73. Code: 0 = confusion, uncertainty, no goals expressed; 1 = definite goals expressed

74. Code: 1 = to evangelize, little social action emphasized; 3 = to evangelize, serve and change all inter-related in purpose

W. Missionary orientation and appraisal (if #75 is 0, omit #76 and 77)
75. Code: 0 = no experience; 1 = six weeks; 2 = three months or longer

76. Missionary Orientation Center
Code: 0 = no experience; 1 = record of experience

77. Appraisal from Missionary Orientation faculty
Code: 0 = should be discouraged; 1 = average; 2 = good; 3 = superior; 4 = exceptional; 5 = a rare find

X. Area of present specialization (primary)
78. Pastoral or church development (ordained)
Code: 0 = non-pastoral; 1 = pastoral

79. Educational: classroom teacher
Code: 0 = not classroom teacher; 1 = classroom teacher, supervisor or administrator

80. Christian education
Code: 0 = not Christian education; 1 = Christian education

81. Medical
Code: 0 = non-medical; 1 = medical technologist or other non-MD or non-RN; 3 = MD; 2 = RN

82. Agricultural (rural development)
Code: 0 = nonagricultural; 1 = agricultural (rural
Social work
Code: 0 = non-social work; 1 = social work

Other
Code: 0 = Pastoral, educational, Christian education, medical, agricultural, or social work; 1 = other

Y. Situational variables in missionary setting
85. Isolation
Code: 1 = service primarily in setting isolated from peers; 2 = mixture of isolation and association; 3 = service primarily in setting allowing association with peers (i.e., persons providing friendship and intellectual exchange)

86. Demography of service environment
Code: 1 = rural or semi-rural (up to 24,999 in population); 2 = small urban (25,000 to 99,999); 3 = urban (100,000 to 499,999); 4 = metropolitan (500,000 and over)

87. Outlook of people in area towards change
Code: 1 = rigid, resisting change; 2 = indifferent, change possible, but difficult; 3 = ready for change

88. Outlook of people in area towards American Protestant missionary
Code: 1 = hostile, closed to him; 2 = indifferent, or mixture of hostility and acceptance; 3 = friendly, accepting.

Criterion Variables

A'. Length of service
89. Code: number of years and months (in decimal fractions)
90. Code: 0 = last term not completed; 1 = last term completed

B'. Service status (if #91 is 2, omit #92-94)
91. Code: 0 = terminated; 1 = on leave; 2 = in service
92. Code: 0 = terminated by administrative action; 1 = terminated or on leave voluntarily or for reasons other than administrative action
93. Code: 0 = termination at end of agreed upon term; 1 = termination within period of agreed upon term
94. Code: 0 = reassigned within period of agreed upon term; 1 = not reassigned within period of agreed upon term.

C'. Health and related areas
95. Code: 0 = no diagnosed physical breakdown
1 = diagnosed physical breakdown
96. Code: 0 = no diagnosed emotional breakdown; 1 = diagnosed emotional breakdown
97. Code: 0 = no chronic health problems; 1 = chronic health problems
98. Code: 0 = no accidents appearing on record; 1 = record of accidents

D'. Judgment of supervisors on missionary's record (Regional secretary or officer in Philippines)
99. Code: 1 = unsatisfactory; 2 = fair; 3 = good; 4 = superior; 5 = outstanding

E'. Missionary in relationships
100. Code: \( r_p \), FIRO-B, six scales, self and most immediate superior
101. Code: \( r_p \), FIRO-B, six scales, self and average of two peers,
102. Code: \( r_p \), FIRO-B, six scales, self and "standard" profile

F'. Missionary in Action
103. Code: \( r_p \), Missionary in Action, self and most immediate supervisor
104. Code: \( r_p \), Missionary in Action, self and average of three peers
105. Code: \( r_p \), Missionary in Action, self and "standard" Missionary in Action
106. Code: Score on Missionary in Action, rating by Missionary Personnel Staff
107. Code: Score on Missionary in Action, rating by Regional Secretary

G'. Professional factors
108. Code: 0 = no expressed dissatisfaction with sponsoring board; 1 = some expressed dissatisfaction; 2 = much expressed dissatisfaction
109. Code: 0 = no expressed doubts about being needed; 1 = some doubt expressed; 2 = much doubt expressed
110. Code: 0 = no role strain reported; 1 = some role strain reported; 2 = much role strain reported
111. Code: 0 = no expressed problems in peer and administrative relationships; 1 = some expressed problems; 2 = much expressed problems
APPENDIX C
EVALUATING THE EFFECTIVENESS OF SEVERAL PREDICTORS OF ACCEPTANCE FOR AND SUCCESS IN THE CHRISTIAN MISSIONARY ENTERPRISE

Revised Listing of Variables, August, 1971

Predictor Variables

A. Denomination prior to the beginning of candidacy
   1. Methodist
   2. Evangelical United Brethren
   3. American Baptist
   4. Presbyterian
   5. Episcopal
   6. Disciples of Christ
   7. Lutheran
   8. Other denominations

B. Candidate's sending Board
   9. United Methodist
   10. United Church of Christ of the Philippines (4 Boards)
   11. American Baptist
   12. Episcopal
   13. Missouri Synod Lutheran

C. 14. Psychological evaluation

D. 15. Psychiatric evaluation

E. Type of service
   16. Short term
   17. Regular term
   18. Career

F. Psychological and/or psychiatric recommendation
   19. Psychological recommendation
   20. Psychiatric recommendation

G. 21. Appraisals by endorsers

H. 22. Involvement in campus life

I. 23. Involvement in church life

J. Marital status
   24. Married or not married
   25. Age at first marriage

K. Parental status
   26. Children or no children
   27. Number of children
   28. Age range of children
29. Sex of children  
30. Degree status and academic standing  
31. Ecclesiastical status  
32. Type of acceptance  
33. Disruption in parental relations  
34. Parents religious workers  
35. Socioeconomic status of parents  
36. Father church member  
37. Mother church member  
38. Age at time of application  
39. Sex  
40. Involvement in social change activities  
41. Theological stance  
42. Missionary goals  
43. Length of missionary orientation  
44. Missionary Orientation Center attendance  
45. Appraisal from Missionary Orientation faculty  
46. Isolation in missionary setting  
47. Demography of service environment  
48. Pastoral or church development (ordained)  
49. Educational: classroom teacher  
50. Other specialization  

**Criterion Variables**  

**A'**. Length of service  
   1. Number of years and months  
   2. Completion or lack of completion of term  

**B'**. 3. Service status  

**C'**. 4. Health and related areas  

**D'**. 5. Judgment of supervisors on missionary's record  

**E'**. Missionary in relationships  
   6. $r_p$, FIRO-B, six scales, self and colleagues
7. rp, FIRO-B, six scales, self and "Standard" profile

F'. Missionary in Action
8. rp, Missionary in Action, self and colleagues
9. rp, Missionary in Action, self and "Standard" profile
10. Score on Missionary in Action, rating by supervisors and personnel staff

G'. Professional factors
11. Satisfaction with board
12. Doubts about being needed
13. Role strain
14. Problems in peer and administrative relationships

H'. Standardized scores on Missionary in Action
15. Factor A
16. Factor B
17. Factor C
18. Factor D
19. Factor E
20. Factor F
21. Factor G
22. Factor H
23. Factor I
24. Factor J
25. Factor K
THE MISSIONARY IN ACTION -
A DESCRIPTIVE CHECK LIST*

Revised April 1970

The MISSIONARY IN ACTION is an attempt to describe the missionary in his setting in the Philippines. It is not intended to be a judgment on the person but a description of him.

All statements (items) below are made in the English masculine, but should be thought of in the feminine for a woman.

PLEASE DO NOT PUT YOUR NAME ANYWHERE ON THIS FORM.

Name of missionary you are describing ______________ Date ______

a. How close are you to him? (Check one.)
   Very, very close ( )
   Very close ( )
   Close, but not very close ( )
   Not really close at all ( )

b. How long have you known him? _____________years

c. Do you work directly with him? (Check one.)
   Yes ( ) No ( )

d. In what capacity do you know him or work with him? (Check one.)
   Missionary colleague ( )
   Filipino colleague ( )
   Administrator ( )

e. Your civil status (Circle one.)
   1. Single
   2. Married
   3. Widowed
   4. Separated/Divorced

f. Your age category at last birthday (Circle one.)
   0 15-19 years 3 30-34 6 45-49
   1 20-24 4 35-39 7 50-54
   2 25-29 5 40-44 8 55-59
   9 60 plus

*For convenience we use the word MINA as the abbreviation for this form.
g. Sex 1 male 2 female

h. Your highest educational attainment (Circle one.)
   0 no education
   1 less than elementary graduate
   2 elementary graduate
   3 1-3 years high school
   4 high school graduate
   5 vocational (post high school)
   6 1-3 years college
   7 college graduate
   8 post college
DIRECTIONS

Place a number (1-5) before each sentence below to indicate how true it is of the missionary you are describing. If you really don't know, because you never observed the missionary in the situation stated in the sentence, put a "?" instead.

Here is the meaning of the numbers you will use:

1 = Yes, yes, it certainly is true of him as far as I know.
2 = Yes, it is usually true of him.
3 = Maybe. It is true of him half the time; but half the time it is not true of him.
4 = No, it is usually not true of him.
5 = No, no it is certainly not true of him as far as I know.
? = Because I have not observed the missionary in this situation, I really cannot answer for this sentence.

Key: 1 = yes, yes; 2 = yes; 3 = maybe; 4 = no; 5 = no, no; ? = do not know.

1. People claim that his example inspires them to serve their fellowmen.
2. He works very hard for a just and merciful social order.
3. People regularly make him the object of their jokes.
4. People do not usually say, "Because of his influence on me, I have become more dedicated to the goal of justice and mercy in society."
5. When he meets difficulties, he gives up.
6. People feel that he is not afraid to share with them his innermost feelings and sentiments.
7. People say, "He gives good advice."
8. He does not appear to be able to hand over his responsibilities and duties to others when they are ready for them.
9. He fails to show by word and deed that he wants other people to develop properly.
10. His words and actions demonstrate that he sees the development of Filipino leaders as important.
11. He manages his personal funds with care and efficiency.
12. There appear to be few sights, sounds, or smells that disgust or annoy him.
13. He decides ahead of time the relative importance of tasks to be performed.
14. He keeps a cool head in times of emergency.
15. He is not regarded as a man of prayer.
16. He finds difficulty in expressing his ideas very
clearly.

17. When people observe him, they say he makes them want to share their Christian faith with others.

18. Some say that he has a clear understanding of how persons develop as persons.

19. When he believes that conditions are too opposed to his basic Christian principles, he lets others know how he feels about the situation.

20. He is generally considered successful in his missionary work.

21. People feel he has made them more aware of those who have special needs, such as the blind and the physically handicapped.

22. He does not seem to be happy and content with his family life and his work.

23. He blames others when things go wrong in his work.

24. Whatever he undertakes, he does well.

25. When decisions must be made, he makes them on time; for example, when the situation is urgent he will make a quick decision, but always after careful thought.

26. He does not plan ahead.

27. People do not regard him as a loyal person.

28. Because of his contact with them, some people who were without Christian faith have become committed to Christ.

29. He expresses his belief that the Christian life is more than just keeping the commandments.

30. He makes Filipinos uncomfortable by his efforts to be one of them.

31. When leadership is called for, he fulfills a leader's role in such a way as to deserve favorable comment.

32. He does not complete the work he begins.

33. When financial matters are entrusted to him (not his personal finances), he handles them with little care or efficiency.

34. When he makes jokes, no one is insulted or hurt.

35. He works smoothly with Board-field personnel.

36. People think of him as a really good person, not just a santo-santito.

37. He judges individual situations in the light of larger reality; he sees the whole picture all the time.

38. He does not seem to be very intelligent.

39. No matter how serious the problem is, he does not show his worries.

40. Some people say, "I have been led by his example to have a greater concern for the poor, the needy, and the oppressed."

41. He rarely misses work because of illness.

42. He speaks and acts in such a way as to indicate he is aware of persons with special needs, such as
53. He initiate the formation of small groups (for fellowship, worship, personal growth and the like).
54. He communicates poorly with his Mission Board.
55. He seems to regard his possessions as means to an end, and not as if they were the most important things in the world to him.
56. He does not initiate activities on his own.
57. In carrying out assigned duties in an organization he does not complain or deliberately work slowly; he does not procrastinate, come late, express many doubts, or find fault.
58. Those who work with him do not say that he helps them to develop a sense of responsibility.
59. People say of him, "He really understands the Philippines and its people."
60. He makes excuses for the failures he suffers in his work.
61. He expresses in both word and actions his lack of
concern about the poor, the needy, and the oppressed.

68. He has a definite time for studying.

69. He demonstrates a lack of efficiency in his use of time.

70. He appears always to be close to God in a relationship that supports him and gives him new life and vision.

71. People do not seem to like him.

72. He shows compassion for others' miseries, but without being so affected by them that he cannot continue to do his work.

73. People do not regard him as one who helps the group perform its tasks better.

74. People express their loyalty to him.

75. Filipinos say, "He's just like one of us."

76. He gets along well with persons of all classes.

77. People say of him, "He understands me and he sympathizes with me. He knows how to put himself in my position."

78. From the remarks he makes you can tell that he does not see and appreciate the humor in situations.

79. Those who work with him do not say that he helps potential leaders to become actual leaders.

80. The statements he makes suggest that he is not really trying to understand the root causes of society's major problems.

81. He enters into controversy only when something has been said or done which is against his basic Christian principles.

82. He does not encourage Filipino Christians to express their Christian faith in the manner they prefer.

83. When he is doing his work, he devotes more or less energy and time to each task according to its relative importance.

84. He helps others develop according to their natural abilities, without forcing them to become what he wants them to be.

85. He is able to work effectively even without overall plans or a formal organization.

86. People ask him for advice on both practical and intellectual problems.

87. He is thought of as one who has a tendency to become very angry.

88. He is not asked for advice on personal problems.

89. When he complains about social conditions he does so not because of major violations of basic Christian principles, but because of some minor issue.

90. When he organizes a school, a church, a conference, or other larger group, he organizes it well.

91. He seems to be influenced less by what he thinks
is right than by what others say he should do.
92. He shows that considers his work to be of very little significance.
93. When he is present in a worship service the worship becomes more meaningful to the others who are present.
94. He is an ambitious person, but in striving for his goals he is careful not to hurt other people.
95. He is depressed when his plans do not succeed.
96. Christians do not say that he has taught them to be more helpful to others.
97. He has many different interests.
98. Those who work with him state that he fails to recognize leadership potential in other persons.
99. Those who are in the same profession as he (teacher, doctor, minister, or whatever) say that he does good professional work.
100. He gets along well with persons of all ages, from childhood to old age.
101. He does not seem to be aware of what is going on around him.
102. When he is asked to undertake some project, he does it as well and as quickly as he can, even though the idea for it came from someone else and not himself.
103a. (as a married person) The members of his family manifest their affection for one another.
103b. (as an unmarried person) He manifests his affection for his friends.
104. He is not the kind of Christian that people feel they should imitate.
105. He expresses his own opinions forcefully yet as diplomatically as he can.
106. Christians say they are grateful for his helping them to understand better what it means to love their fellowmen.
107. People do not appear to enjoy his humor.
108. When he suffers a major frustration or disappointment or when someone very close to him dies, he reacts in a calm manner and with no more than the ordinary and expected emotional reactions.
109. Those who work with him speak of how he helps them develop their professional skills.
110. His home is a practical demonstration of the type of life he advocates.
111a. (as a married person) There seems to be a calm and pleasant atmosphere among the members of his family.
111b. (as an unmarried person) He contributes to the spirit of calm and pleasantness that is found in the group he lives with.
112. His words and actions suggest that he does not enjoy helping others.
113. He appears to be seeking religious answers to problems, no matter what they concern or how big they are.

114. He listens to others when they express their opinions, even though their opinions are contrary to his own.

115. He seems to be relatively free of unchristian prejudices.

116. Those who come to him for advice on personal problems often become dependent upon him.

117. His philosophy of life seems to make sense and to be fairly logical.

118. He expresses differences of opinion in such a way as to seem to be attacking the sincerity of other people.

119. He avoids disagreeable tasks, assignments, or responsibilities.

120. The poor, the oppressed, and the needy find him sympathetic to their problems.

121. People say that when social changes take place, he reacts positively to them.

122. People do not feel that he has a sincere interest in them.

123. When people are angry with one another, he knows how to bring them together.

124. By his words and actions you know that he has a reverence and respect for plants, animals, and all of God's creatures.

125. He seems to say exactly what he thinks.

126. The statements he makes about himself show that he really does not understand himself.

127. He shows originality in carrying out projects, whether or not it was he who planned them in the first place.

128. He leads a group or class in such a way as to discourage involvement of others in discussion and/or action.

129. He listens to advice but he makes independent decisions.

130. He seems not to be well informed about important local and world developments.

131. People consider him a man who has many good ideas.

132. You can see that he has a basically pessimistic view of life.

133. Small groups do not gather around him spontaneously (for fellowship, worship, personal growth, and the like).

134. He has close friends among the people of the Philippines. (NOTE: Do not consider the number of close friends here; only whether it is true or not that he has any close friends among the people of the Philippines.)

135. He appears to have sufficient energy to carry out
his duties.

136. He behaves in accord with Christian moral principles.

137. He shows an inadequate capacity to adjust to cultural demands different from those of his native culture.

138. He has no close friends among his fellow missionaries. (NOTE: Do not consider the number of close friends here; only whether it is true or not that he has any close friends among his fellow missionaries.)

139. He treats people graciously without showing off.

140. He gives and takes compliments gracefully.

141. As far as one can tell, he seems to have no neurotic traits such as extreme compulsions, fears, depressions, or symptoms like hysterical deafness or anaesthesia.

142. People appear to enjoy being with him.

143. He has several habits or mannerisms that are annoying.

144. When he becomes the leader, he does so in such a manner as often to give offense to others.

145. He is competent in speaking the Filipino language of the place he lives in,

146. He does not show creativity in planning projects.

147. Even when others fail to encourage or praise him, he does not slow down or stop work on a project in which he is engaged.

148. It is clear that he is trying to understand and adjust to life in the Philippines.

149. He appears to be one who "does not think more highly of himself than he ought to think."

150a. (as a married person) He speaks and acts in such a way as to help his spouse feel respected by others,

150b. (as an unmarried person) He speaks and acts in such a way as to help his colleagues and friends feel they are respected by others.

151. He is a truly dedicated and committed person.

152. He handles details well without losing sight of the aims of the project in which he is engaged.

153. He is regarded as one who argues excessively.

154. Those who come to him for advice on matters affecting the group become dependent on him.

155. People say that he has helped them develop themselves as persons.

THANK YOU VERY MUCH!
### Factor Loadings on the Mina

#### Factor A: Empathic, capable acceptance

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<thead>
<tr>
<th></th>
<th>Loadings</th>
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<tbody>
<tr>
<td>77.</td>
<td>0.82</td>
</tr>
</tbody>
</table>
| People say of him, "He understands me and he sympathizes with me. He knows how to put himself in my position."
| 106. | 0.78 |
| Christians say they are grateful for his helping them to understand better what it means to love their fellowmen.
| 1. | 0.73 |
| People claim that his example inspires them to serve their fellowmen.
| 65. | 0.72 |
| People say of him, "He really understands the Philippines and its people."
| 76. | 0.72 |
| He gets along well with persons of all classes.
| 61. | 0.71 |
| He is looked upon as one who understands the very heart of important matters.
| 100. | 0.70 |
| He gets along well with persons of all ages, from childhood to old age.
| 123. | 0.70 |
| When people are angry with one another, he knows how to bring them together.
| 36. | 0.68 |
| People think of him as a really good person; not just a santo-santito.
| 74. | 0.68 |
| People express their loyalty to him.
| 18. | 0.67 |
| Some say that he has a clear understanding of how persons develop as persons.
| 7. | 0.64 |
| People say, "He gives good advice."
| 75. | 0.64 |
| Filipinos say, "He's just like one of us."
| 50. | 0.63 |
| Some say, "he makes me feel better about myself. I think of myself as a better person because of my association with him."
| 51. | 0.58 |
| He communicates well with others, regardless of the ability he manifests in any Filipino language.
| 2. | 0.52 |
| He works very hard for a just and merciful social order.

#### Factor B: Selfish, unaware incompetence

<table>
<thead>
<tr>
<th></th>
<th>Loadings</th>
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<tbody>
<tr>
<td>78.</td>
<td>-0.52</td>
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</table>
| From the remarks he makes you can tell that he does not see and appreciate the humor in situations.
| 130. | -0.54 |
| He seems not to be well informed about important local and world developments.
| 79. | -0.55 |
| Those who work with him do not say that he helps potential leaders to become actual leaders.
| 138. | -0.56 |
| He has no close friends among his fellow missionaries.
| 96. | -0.57 |
| Christians do not say that he has taught them to be more helpful to others.
43. -0.69 He does not appear to enjoy art, music and literature.
126. -0.60 The statements he makes about himself show that he really does not understand himself.
22. -0.62 He does not seem to be happy and content with his family life and his work.
146. -0.63 He does not show creativity in planning projects.
38. -0.63 He does not seem to be very intelligent.
101. -0.65 He does not seem to be aware of what is going on around him.
82. -0.65 He does not encourage Filipino Christians to express their Christian faith in the manner they prefer.
148. -0.65 He is not regarded as being thoughtful of others.
73. -0.66 People do not regard him as one who helps the group perform its tasks better.
27. -0.66 People do not regard him as a loyal person.
122. -0.67 People do not feel that he has a sincere interest in them.
104. -0.69 He is not the kind of Christian that people feel they should imitate.

Factor C: Creative efficiency vs. stereotyped inefficiency

152. 0.76 He handles details well without losing sight of the aims of the project in which he is engaged.
24. 0.75 Whatever he undertakes, he does well.
46. 0.68 No matter what organization he is working in, he carries out his responsibilities very well.
90. 0.66 When he organizes a school, a church, a conference, or other larger group, he organizes it well.
25. 0.65 When decisions must be made, he makes them on time; for example, when the situation is urgent he will make a quick decision, but always after careful thought.
151. 0.62 He is a truly dedicated and committed person.
37. 0.58 He judges individual situations in the light of larger reality; he sees the whole picture all the time.
57. 0.57 He has very high ideals, but those who know him think that he can achieve them.
13. 0.55 He decides ahead of time the relative importance of tasks to be performed.
83. 0.51 When he is doing his work, he devotes more or less energy and time to each task according to its relative importance.
5. -0.51 When he meets difficulties, he gives up.
49. -0.53 He gives up easily when there is a job to do.
54. -0.53 He communicates poorly with his Mission Board.
32. -0.53 He does not complete the work he begins.
16. -0.56 He finds difficulty in expressing his ideas very
He does not plan ahead.

He demonstrates a lack of efficiency in his use of time.

**Factor D:** Liberalistic tolerance vs. narrow-minded dominance

121. 0.59 People say that when social changes take place, he reacts positively to them.

64. 0.54 He helps others develop according to their natural abilities, without forcing them to become what he wants them to be.

47. 0.53 People say that when social changes occur he uses this as an opportunity to strengthen his own faith and the faith of others.

155. 0.51 People say that he has helped them develop themselves as persons.

108. 0.43 When he suffers a major frustration or disappointment, or when someone very close to him dies he reacts in a calm manner and with no more than the ordinary and expected emotional reactions.

147. 0.43 Even when others fail to encourage or praise him, he does not slow down or stop work on a project in which he is engaged.

23. -0.46 He blames others when things go wrong in his work.

45. -0.47 He manifests little capacity to learn from the people and situations in the Philippines.

9. -0.45 He fails to show by word and deed that he wants other people to develop properly.

96. -0.54 Those who work with him state that he fails to recognize leadership potential in other persons.

8. -0.56 He does not appear to be able to hand over his responsibilities and duties to others when they are ready for them.

**Factor E:** Thoughtful affiliativeness vs. careless aloofness

86. 0.58 People ask him for advice on both practical and intellectual problems.

142. 0.58 People appear to enjoy being with him.

117. 0.52 His philosophy of life seems to make sense and to be fairly logical.

97. 0.51 He has many different interests.

131. 0.51 People consider him a man who has many good ideas.

120. 0.47 The poor, the oppressed, and the needy find him sympathetic to their problems.

85. 0.44 He is able to work effectively even without overall plans or a formal organization.
104. 0.44 He expresses his own opinions forcefully yet as diplomatically as he can.
107. -0.46 People do not appear to enjoy his humor.
97. -0.46 He shows that he considers his work to be of very little significance.
101. -0.49 He is not asked for advice on personal problems.
112. -0.49 His words and actions suggest that he does not enjoy helping others.
130. -0.50 The statements he makes suggest that he is not really trying to understand the root causes of society's major problems.

Factor F: Successful, imaginative leadership vs. unsuccessful leadership

53. 0.64 When following rather than leading is called for, he fulfills a follower's role in such a manner as to deserve favorable comment.
31. 0.53 When leadership is called for, he fulfills a leader's role in such a way as to deserve favorable comment.
22. 0.51 Those who are in the same profession as he (teacher, doctor, minister, or whatever) say that he does good professional work.
41. 0.50 He rarely misses work because of illness.
102. 0.48 Those who work with him speak of how he helps them develop their professional skills.
102. 0.46 When he is asked to undertake some project, he does it as well and as quickly as he can, even though the idea for it came from someone else and not himself.
115. 0.46 He seems to be relatively free of unchristian prejudices.
122. 0.45 He shows originality in carrying out projects, whether or not it was he who planned them in the first place.
66. -0.40 He makes excuses for the failures he suffers in his work.

Factor G: Sensitive reverence vs. unresponsive irreverence

52. 0.62 He is spoken of as one who is very deep spiritually.
32. 0.60 Because of his contact with them, some people who were without Christian faith have become committed to Christ.
56. 0.54 He initiates the formation of small groups (for fellowship, worship, personal growth and the like).
70. 0.61 He appears always to be close to God in a relationship that supports him and gives him new
When people observe him, they say he makes them want to share their Christian faith with others.

When he is present in a worship service the worship becomes more meaningful to the others who are present.

He has a definite time for studying.

Small groups do not gather around him spontaneously (for fellowship, worship, personal growth, and the like).

He is not regarded as a man of prayer.

Factor III: Dedicated humility

It is clear that he is trying to understand and adjust to life in the Philippines.

He gives and takes compliments gracefully.

He appears to be one who "does not think more highly of himself than he ought to think."

He treats people graciously without showing off.

He listens to others when they express their opinions, even though their opinions are contrary to his own.

He appears to have sufficient energy to carry out his duties.

By his words and actions you know that he has a reverence and respect for plants, animals, and all of God's creatures.

He behaves in accord with Christian moral principles.

Factor I: Accepting openmindedness vs. rejecting close-mindedness

He has close friends among the people of the Philippines.

He is generally considered successful in his missionary work.

He works smoothly with Board-field personnel.

He responds to criticisms without expressing anger or resentment, or taking vengeance.

People do not seem to like him.

He is thought of as one who has a tendency to become very angry.

People do not say of him, "He really enjoys the life and people of the Philippines."

People regularly make him the object of their jokes.

He leads a group or class in such a way as to discourage involvement of others in discussion and/or action.

He shows an inadequate capacity to adjust to...
cultural demands different from those of his native culture.

168. -0.48 When he becomes the leader, he does so in such a manner as often to give offense to others.

169. -0.49 He is regarded as one who argues excessively.

170. -0.51 He expresses differences of opinion in such a way as to seem to be attacking the sincerity of other people.

Factor J: Sympathetic concern vs. neglectful unconcern

21. 0.49 People feel he has made them more aware of those who have special needs, such as the blind and the physically handicapped.

52. 0.47 He speaks and acts in such a way as to indicate he is aware of persons with special needs, such as the blind and the physically handicapped.

80. 0.44 Some people say, "I have been led by his example to have a greater concern for the poor, the needy, and the oppressed."

87. -0.41 He expresses in both word and actions his lack of concern about the poor, the needy, and the oppressed.

Factor K: Supportive demonstrativeness

111. 0.63 (as a married person) There seems to be a calm and pleasant atmosphere among the members of his family.

103. 0.57 (as a married person) The members of his family manifest their affection for one another.

170. 0.54 His home is a practical demonstration of the type of life he advocates.

176. 0.37 (as a married person) He speaks and acts in such a way as to help his spouse feel respected by others.
### rp COEFFICIENTS ON FIRO-B

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