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Personal Adjustment Among Older Persons

Denton Morrison

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June 1958

Personal Adjustment Among Older Persons

*A Study of Adjustment Problems of Persons 65 and Over
In a South Dakota Community*

RURAL SOCIOLOGY DEPARTMENT



AGRICULTURAL EXPERIMENT STATION
SOUTH DAKOTA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS
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Personal Adjustment Among Older Persons

*A Study of Adjustment Problems of Persons 65 and Over
In a South Dakota Community*

DENTON E. MORRISON and G. ALBERT KRISTJANSON¹

Introduction

Purpose of the Study

Declining health, loss of physical vigor, and the increased probability of death are conditions to which the aged of all societies must adjust. In addition, many older citizens in American society must face unique problems including the termination of gainful employment; reduced income; isolation through death or removal of family, friends, and peers; increased periods of indolence; and a decreasing standard of living. Moreover, later life, with its attendant complex of problems, now faces both numerically and proportionately more people in this country than ever before. The problems of older citizens in American society have therefore become the focus of considerable public attention in recent years.

Particularly in South Dakota do growing numbers of older citizens give cause for increasing concern with their problems. Between 1930

and 1950 the population of South Dakota declined by 5.8%, but during this period the number of persons 65 years old and older increased by 49.8%. Indeed, South Dakota in 1950 had a slightly higher proportion of persons 65 and over than the United States as a whole.²

Within the state, the concentration of older persons is decidedly in the rural-nonfarm classification. While in 1950, 8.5% of the state's population was 65 or older, 12.3% of the state's rural-nonfarm residents were in this age bracket.³

Thus it is that the present study focuses on the problems of adjustment confronting older citizens in the rural-nonfarm community of

¹Graduate assistant and assistant rural sociologist, South Dakota Agricultural Experiment Station.

²John P. Johansen, *The Influence of Migration Upon South Dakota's Population, 1930-1950*, p. 39.

³*Ibid.*, pp. 6 and 21.

Dell Rapids, South Dakota. The central question which the study seeks to contribute toward answering can be stated as follows: "What are the relationships between such factors as health, economic circumstances, isolation, activities, income, etc., and the personal adjustment of older citizens?"

Basic Assumptions of the Study

It is assumed in the present study that once the phenomenon of personal adjustment is adequately defined, it can be measured by inferences gained from the respondent's own evaluation and statement of his attitudes. In the present study, personal adjustment is measured with the criterion of morale, and the theoretical reasons for doing so are outlined in the "Framework of the Study" section of this bulletin; however, the supposition that a qualitative variable (in the present case morale) can be quantified rests on assumptive grounds.

Another assumption of the present study is that similar responses from different respondents have essentially identical meanings. When respondents X and Y both reply that their health is "good" it is assumed that the term "good" refers to essentially the same state of health for both. That the making of such an assumption has semantic shortcomings is realized: that the

assumption is unavoidable in any type of research dealing with interviewee responses is apparent.

Finally, it is assumed that the most nearly adequate definition of old age is the chronological criterion of 65 years and over. To be sure, the quality of age is not entirely a matter of years. However, chronological age is readily and accurately determinable, and 65 and over is the age which has most frequently been used by past researchers. The avoidance of such a widely accepted criterion would limit the comparability of one's findings with previous research.

The Basic Hypothesis of the Study

The basic hypothesis of the present study is that the personal adjustment of older persons (as measured by a Guttman scale of morale) is related to selected independent variables.

While this broad hypothesis is not directly testable, it nevertheless serves as a basic hypothesis which the more specific sub-hypotheses of the study move toward testing. Specific sub-hypotheses on the relationships between such factors as health, economic circumstances, activities, isolation, and personal adjustment are explicitly stated in the "Findings of the Study" section of this bulletin, and are tested according to the established criteria.

Framework of the Study

Previous Theories of Personal Adjustment

Cavan and her associates differentiate personal from social adjustment as follows:

Personal adjustment signifies the reorientation of the attitudes and behavior of the person to meet the requirements of a changed situation. Social adjustment means adaptation to social change by modification of social norms and standards and sometimes also of the functions, structure, and operations of social institutions.⁴

Further elaborating on the definition of personal adjustment, Cavan states:

Personal adjustment to ageing, or to other changes in one's self or one's environment, may be defined as the individual's reconstruction of his attitudes and behavior in response to each new situation in such a way as to integrate the expression of his aspirations with the expectations and demands of society. The definition stresses the fact that adjustment represents an integrated reaction of the person as a member of society to a new situation.⁵

Cavan goes on to derive an operational definition of personal adjustment in terms of (1) an inventory of the individual's expressed (a) satisfactions with activities and status, (b) general happiness, and (c) feelings of usefulness; and (2) an inventory of the individual's degree of participation in various social, religious, economic, and leisure time activities.⁶

Phillips notes that Cavan's con-

ception of personal adjustment "involves the fitting together of two variables: the needs of the individual and the expectations of others in society."⁷ This, coupled with Cavan's additional observation that growing old involves for persons in American society the relinquishment of social relationships and roles typical of adulthood, and the acceptance of social relationships and roles typical of the later years, provides Phillips with the basis for positing a role theory approach to personal adjustment in old age.⁸ Phillips' basic thesis is that "it is possible to conceive of a good deal of the personal adjustment of the aged as stemming from shifts in roles as well as the magnitude of the rewards attached to them."⁹ Thus, by looking at maladjustment "as a state in which the rewards provided to the individual are insufficient to satisfy his needs; then an investigation of the roles of the individual,

⁴Ruth Cavan *et al.*, *Personal Adjustment in Old Age*, p. 10.

⁵*Ibid.*, p. 11.

⁶*Ibid.*, pp. 111-137.

⁷Bernard S. Phillips, "A Role Theory Approach to Predicting Adjustment of the Aged in Two Communities" (unpublished Ph.D. dissertation, Department of Sociology, Cornell University, 1956), p. 20. For a concise treatment of Phillips' approach see: Bernard S. Phillips, "A Role Theory Approach to Adjustment in Old Age," *American Sociological Review*, 22 (1957), pp. 212-217.

⁸Phillips, "A Role Theory Approach to Predicting Adjustment of the Aged in Two Communities," pp. 21-22.

⁹*Ibid.*, p. 23.

which to a large extent determine the degree of reward, would be a valuable aid in predicting maladjustment."¹⁰ Stated in another way, Phillips maintains that personal adjustment may "be defined in terms of the degree to which needs have been fitted to expectations."¹¹

With this conceptual framework Phillips has constructed a three question Guttman scale containing questions on absentmindedness, day-dreaming about the past, and thoughts of death to indicate the degree to which non-rewarding roles in old age result in the individuals being habitually involved in the world of fantasy.¹²

Limitations of Previous Approaches

While the Cavan approach encompasses as a partial measure of personal adjustment the degree of involvement in various activities, the investigators are cognizant of the limitations of activities as an adjustment indicator. They state in regard to activities that, "A disadvantage of the criterion is that it takes into account only the external nature of the activity, rather than its meaning to the person."¹³ Thus, while involvement in many activities may bring increased life satisfaction to one individual, this is not necessarily true for all persons.

The Phillips' approach, stressing "the degree to which role behavior is rewarding to the individual,"¹⁴ carries with it the unavoidable implication that rewards are satisfying to individuals, and the suggestion that an alternative method of measuring personal adjustment

could consist of measuring these satisfactions rather than symptoms of dissatisfactions with roles as indicated in habitual fantasy involvements. Moreover, the limitations of the role theory approach to personal adjustment are pointed out by Phillips himself, who notes that "all of human behavior is certainly not role behavior, but only that portion of it which is exposed to patterns of social prescriptions."¹⁵ Behavior which cannot be construed as being role behavior can thus be rewarding and non-rewarding for an individual, and it is apparent that such rewards or their deprivation have importance for personal adjustment. A broken leg or a lack of food, for instance, would conceivably be distinctly non-rewarding to even persons removed from human contacts.

The Present Theoretical Framework

The present study broadly defines personal adjustment as success in dealing with changing life problems. This conception of personal adjustment differs slightly from the schema offered by both Cavan and Phillips and is designed to circumvent the shortcomings in their approaches. Cavan's designation that personal adjustment "signifies the reorientation of the attitudes and behavior of the person to meet the requirements of a changed situa-

¹⁰*Ibid.*, pp. 37-38.

¹¹*Ibid.*

¹²*Ibid.*, pp. 40-43.

¹³Cavan *et al.*, *op. cit.*, p. 103.

¹⁴Phillips, *op. cit.*, p. 22.

¹⁵*Ibid.*, p. 23.

tion"¹⁶ fails to recognize that reoriented attitudes to a changed situation do not necessarily constitute an adequate or successful adjustment for the individual. Moreover, the investigators apparently recognize the shortcomings in their nominal definition. Cavan's operational criteria of "satisfactions," "general happiness," and "feelings of usefulness" all carry the unmistakable connotation that the individual has coped with his problems successfully.

The Phillips definition of personal adjustment, on the other hand, fails to encompass the fact that the rewards of life do not come entirely from the role behavior of the individual.

The definition of personal adjustment as success in dealing with changing life problems explicitly recognizes that persons can be thought of as adjusted only in terms of the degree to which they have dealt adequately (at least in their own minds) with their problems. The definition, in addition, is broad enough to include the life problems stemming from misaligned expectations as to the magnitude of rewards from changing roles, and also those problems of declining health, inadequate subsistence provisions, etc.

The central problem in the present definition of personal adjustment is that of defining "success" operationally. Let it be said at the outset that the present conception of success entails no hidden value judgments. The one assumption involved in the present conception

is that success in dealing with life problems will be reflected in attitudes of satisfaction with life, optimism, and expanding life perspectives. Thus, the present study has adopted as the most nearly adequate operational definition of personal adjustment the criterion of morale. In this study we shall mean by morale a continuum of responses to life and living problems which reflect the presence or absence of satisfaction, optimism, and expanding life perspectives. The measure of morale in this study is based on responses which formed a Guttman scale for the following items:¹⁷

1. I would like to know whether you agree or disagree with this statement: Things just keep getting worse and worse for me as I get older.
2. How often do you feel there's just no point in living?
3. In general, how satisfied would you say you are with your way of life today?
4. How often do you find yourself regretting the way things turned out for you?
5. All in all, how much unhappiness would you say you find in life today?

¹⁶Cavan *et al.*, *op. cit.*, p. 10.

¹⁷Bernard Kutner, *et al.*, provide the concept, definition, and measure of morale used in the present study in *Five Hundred Over Sixty*, pp. 48-49. Five of the six questions in the present scale were derived from Kutner, who also used a Guttman scale of morale for measuring personal adjustment. The "Measuring Personal Adjustment: Guttman Scale Methods" section of this bulletin contains the rationale for the Guttman scale of morale, as well as the methods and criteria which entered into its formulation.

6. As you get older would you say that things seem to be better or worse than you thought they would be?

Although any criterion of personal adjustment can be criticized on the basis that it fails to account for one or another factor, the criterion of morale has the following advantages: (1) it is essentially similar to Cavan's widely used criteria of general happiness, satisfactions with activities and statuses, and feelings of usefulness, without encompassing Cavan's dubious criterion of activities; (2) it can measure, in terms of expressed satisfactions, the degree to which both role **and other** behavior are rewarding to the individual.¹⁸

While the concept of morale as an indicator of personal adjustment is subjectively measured, that is, in terms of the respondent's own evaluation of his "success" in dealing with his problems, and might conceivably vary from some external criterion of success established by one or all outside observers, there are theoretical reasons for maintaining that the extent to which this feature constitutes a limitation of the measure is negligible. The widely accepted sociological concepts of "self," "role," etc., strongly suggest that personal evaluations of situations are directly related to, in fact come largely **from** group evaluations. Thus, it would be a rare instance where an individual's morale would be high when most other persons in his situation would exhibit low morale. If one assumes

that numerous instances do occur when personal evaluations of situations differ from group evaluations, Thomas' concept of the "definition of the situation," the idea that situations defined as real are real in their consequences, would seem to indicate the additional merit of measuring subjective evaluations of morale.

One very real limitation of the concept of morale as a measure of adjustment should explicitly be mentioned. The measure which morale provides of personal adjustment at the given time of the study may not reflect with complete accuracy the adjustment which typifies the individual. The present study has attempted to compensate for this shortcoming of morale as a criterion of adjustment by asking a range of several questions which tapped not only the current "mood" of the individual, but also his characteristic state of morale. While this technique has utility, it is not conceived of as superceding in value other research techniques which might approach the problem of morale and personal adjustment from a longitudinal standpoint.

¹⁸Evidence for fundamental overlappings in measures of "morale" and "role rewards" as criteria for personal adjustment is offered by Phillips, *op. cit.*, pp. 44 and 122. Using a "satisfaction-with-life" Guttman scale consisting of four items identical to items three, four, five, and six in the present morale scale to cross-check the validity of his fantasy involvement scale (which measures the degree to which roles are rewarding), Phillips finds that the two are significantly related.

Summary of Previous Research Findings

In the "Framework of the Study" section of this bulletin, certain limitations in former approaches to personal adjustment were discussed, as well as the differences and similarities of past approaches and the present one. The objective of the present section is to briefly summarize past research findings on the relationship between personal adjustment and selected factors in the lives of older persons. The summary is entirely factual without attempting to be critical; the tabular form in which the information is presented has been employed to facilitate a comparison of the findings of various investigators.

It will be noted that the Cavan attitude¹⁹ inventory has been the

most widely used measure of personal adjustment in aging. The Phillips role theory approach is relatively new and has not been used by other investigators. The approach of Kutner *et al.* served as the model for the present approach, and is methodologically the most comparable to the present study. It should be noted, however, that the Kutner study was conducted among a sample composed of urban older persons in New York City.

¹⁹Although Cavan *et al.* considered both attitudes and activities as criteria for personal adjustment, users of the Cavan scale have for the most part preferred to use only the Cavan attitude inventory as the criteria for adjustment, treating activities as an independent variable.

A Note on Reading and Interpreting the Summary. Statements in the summary table preceded by a plus (+) sign should be read, "Personal adjustment was found positively related to . . .," those preceded by a minus (-) sign should be read, "Personal adjustment was found negatively related to . . .," and those preceded by a zero (0) should be read, "Personal adjustment was not found related to . . ." No differentiation in the summary is made between statistically significant and non-significant relationships as this information was lacking in many of the studies reported.

Table 1. Summary of Previous Research Findings

Investigator	Schmidt ^a	Burgess ^b	Scott ^c
Method	Cavan attitude scale on a sample 50 years and older in Akron, Ohio and Kansas City	Cavan attitude scale on residents of Florida dwelling halls	Cavan attitude scale on institutionalized and non-institutionalized, Austin, Texas
Relationship of Adjustment to Marital Status	—being unmarried or not living with spouse		
Adjustment to Health	—serious health problem		
Adjustment to Employment			
Adjustment to Economic Circumstances			
Adjustment to Activities	—low activities score +club participation	+group activities more than solitary or spectator activities	+number of leisure time activities
Adjustment to Age			
Adjustment to Isolation	—less visits with friends now —no close friends seen often		+frequency of contacts with friends, young people
Adjustment to Other Factors			+past adjustment +non-institutionalization

^aJohn F. Schmidt, "Patterns of Poor Adjustment in Old Age," *American Journal of Sociology*, 57 (1951), pp. 33-42.

^bErnest W. Burgess, "Social Relations, Activities, and Personal Adjustment," *American Journal of Sociology*, 59 (1954), pp. 352-360.

^cFrances G. Scott, "Factors in the Personal Adjustment of Institutionalized and Non-Institutionalized Aged," *American Sociological Review*, 20 (1955), pp. 538-546.

Table 1. Summary of Previous Research Findings (continued)

Investigator	Albrecht ^d	Joseph Britton ^e	Jean and Joseph Britton ^f
Method	Cavan attitude scale on a sample over 65 in small midwest community	Cavan attitude scale in mail questionnaire study, retired Chicago school teachers	Cavan attitude scale in mail questionnaire study, retired Chicago YMCA secretaries
Relationship of Adjustment to Marital Status			
Adjustment to Health		—nervous troubles	—no. of serious health problems
Adjustment to Employment			+employment
Adjustment to Economic Circumstances		+economic position	+economic position
Adjustment to Activities	+participation in social clubs, social activities, civic activities	+total activities score +club participation	+total activities score
Adjustment to Age			—actual age
Adjustment to Isolation			
Adjustment to Other Factors	+being independent of children or having dependent children. —dependence on children for support		

^dRuth Albrecht, "The Social Roles of Older People," *Journal of Gerontology*, 6 (1951) pp. 138-145^eJoseph H. Britton, "The Personal Adjustment of Retired School Teachers," *Journal of Gerontology*, 8 (1953), pp. 333-338.^fJean O. Britton and Joseph H. Britton, "Factors Related to the Adjustment of Retired YMCA Secretaries," *Journal of Gerontology*, 6 (1951), pp. 34-38.

Table 1. Summary of Previous Research Findings (continued)

Investigator	Shanas ^a	Havighurst and Albrecht ^b	Mason ^c
Method	Cavan attitude scale on persons receiving OAA, residential area of Chicago	Cavan attitude scale on sample of older persons, small midwestern community	Judgments of self-worth as an index of adjustment, St. Louis older persons
Relationship of Adjustment to Marital Status	+marriage +family intimacy		
Adjustment to Health	+health +no. of physical problems		
Adjustment to Employment			
Adjustment to Economic Circumstances	+financial situation	0 socioeconomic status	
Adjustment to Activities	+organizational membership and attendance +social participation		
Adjustment to Age	+concept of self as middle-aged	-felt age 0 actual age	+concept of self as younger than actual age
Adjustment to Isolation	+no. of friends +no. of intimate friends		
Adjustment to Other Factors			+evaluation of past and present life as happy

^aEthel Shanas, "The Personal Adjustment of Recipients of Old Age Assistance," *Journal of Gerontology*, 4 (1950), pp. 249-253.

^bRobert J. Havighurst and Ruth Albrecht, *Older People*, New York: Longmans Green and Co., 1951. *passim*.

^cEvelyn P. Mason, "Some Correlates of Self-Judgment of the Aging," *Journal of Gerontology*, 9 (1954), pp. 324-327.

Table 1. Summary of Previous Research Findings (continued)

Investigator	Phillips ^j	Cavan ^k	Kutner ^l
Method	Guttman scale of fantasy escape from non-rewarding roles, urban older citizens	Cavan attitude scale to check relation of responses to activities, large sample over 60	Guttman scale of morale, sample of city persons over 60 (New York)
Relationship of Adjustment to Marital Status	+marriage 0 happiness of marriage	+marriage	+marriage +length of widowhood
Adjustment to Health	+health	+health	+health
Adjustment to Employment	+employment +enjoyment of work	-semi-skilled and skilled occupations as compared to professions for men	+employment
Adjustment to Economic Circumstances		0 OAA as chief source of income for men	+high socioeconomic status +income
Adjustment to Activities	-frequency of reading	+social participation	+activities
Adjustment to Age	-actual age -concept of self as old	-actual age	-actual age +self concept of young or middle-aged
Adjustment to Isolation	+role in friendship group 0 no. of close friends		0 frequent interaction with friends, children, relatives
Adjustment to Other Factors	-sudden role changes +satisfaction with life -rigid behavior -feelings of being treated differently 0 frequency of interaction with friends, relatives, children	-no religious affiliation for men. -past adjustment difficulties	-lack of significant roles +self concept of younger, healthier, better living standard than others of same age

^jPhillips, *op. cit.*, pp. 29-36.

^kCavan *et al.*, *op. cit.*, pp. 188-199.

^lKutner *et al.*, *op. cit.*, pp. 50-122.

Design of the Study

The Study Community

The data for the present study were gathered in Dell Rapids, South Dakota, during June of 1957 by four interviewers who personally interviewed each respondent.

The study community is located in the southeastern portion of South Dakota, 20 miles north of the state's largest city, Sioux Falls. The selection of Dell Rapids as the study community was based on three criteria. First, the nearness of the study community to the authors' base of operations (40 miles) made it economically more feasible than a more distant community. It was arbitrarily decided in the planning stage of the study that a rural-nonfarm community would be selected for investigation. According to the 1950 census, the population of Dell Rapids was 1,650, which places it in the rural - nonfarm classification. Second, Dell Rapids contains a disproportionately large number of persons 65 years of age and over, which is the arbitrarily determined age limit used in this study to define "older persons." According to 1950 census data²⁰ 305 or 18.5% of Dell Rapids' 1,650 residents were 65 years of age or over, while other communities in the state with between 1,000 and 2,500 residents averaged only 12.3% of their citizens in this age category.²¹ The large proportion of older citizens in Dell Rapids allowed the supposition that a sizable sample for the present study could be easily obtained. Third, the location of a relatively large retirement institution in the

community fit in well with the purposes of a broader project of which the present study is a part.

The community of Dell Rapids was selected more because of its nonrepresentativeness in having a large proportion of older persons than because of the many ways in which it seemed typical of the state's rural - nonfarm communities. Because Dell Rapids was of rural-nonfarm size and contained a large number of both non-institutionalized and institutionalized older persons, it was selected for study.

The Interview Schedule

The schedule for the present study was developed after an extensive review of literature dealing

²⁰U. S. Bureau of the Census, *U. S. Census of Population: 1950*, Vol. II, *Characteristics of the Population*, Part 41, South Dakota, Chapter B., pp 41-54

²¹Only one community in South Dakota with between 1,000-2,500 inhabitants in 1950 exceeded Dell Rapids in its proportion of citizens 65 or over. This community was Tyndall with 18.9% of its residents 65 or older. However, a comparison of Dell Rapids with other communities should be tempered by the knowledge that a relatively large retirement home in Dell Rapids contributes to its large population of older citizens. Although it is not known how many persons 65 or over were living in this retirement institution in 1950, there were 41 at the time of the present study. Assuming that this would approximate the number of older persons in this institution in 1950, and subtracting 41 from 305, it can be estimated that in 1950 around 264 or 16.0% of Dell Rapids citizens living in private residences were 65 or older. This figure is still well in excess of the 12.3% other communities with from 1,000 to 2,500 residents averaged.

with the various aspects of adjustment in the later years. Some questions were drawn from previous studies;²² others were suggested by apparent gaps in research findings on personal adjustment in old age. Major areas covered by the schedule, in addition to basic personal background data, are health, employment, economic circumstances, social and personal activities, attitudes toward aging, extent of social isolation, and personal adjustment. The interview schedule was pre-tested by interviewing several older citizens in Volga, South Dakota, prior to the field work in Dell Rapids. On the basis of the pre-test, some questions on the schedule were omitted, others were re-written for greater clarity, and the format of the schedule was revised for greater ease of handling.²³ Completion of the schedule took an average of about an hour for each respondent.

Sampling and Interviewing Procedure

Respondents in the present study were selected for interviewing by use of a random area sample. City blocks within the city limits of Dell Rapids served as the "areas" for sampling, and were numbered consecutively from left to right beginning with the block in the northwest corner of town. Only blocks which contained one or more single or multiple occupied private²⁴ dwelling units were given numbers. The total number of dwelling units inside the numbered blocks (506) was then divided by the total number of blocks containing dwelling

units (90) to obtain the average number of dwelling units per block (5.6). Three additional "theoretical" blocks were then constructed containing five, five, and six houses respectively lying on the periphery of Dell Rapids which were not in blocks, but were within the boundaries of the city. Thus the total number of "areas" for sampling in the study was 93.

The absence of a current list or count of persons 65 years of age or older made it impossible to determine in advance how many potential respondents would be found in any given block or group of blocks. Using a table of random numbers, a 50% sample of blocks was drawn giving a sample size of 47 blocks (half of the total of 93 blocks). To insure an adequate sample size in case the 47 blocks did not contain the desired number of respondents, 60 and 70% area sample levels of nine additional blocks each were drawn at random from the remaining 46 blocks.

Since there was no way of knowing in which houses of the block

²²The interview schedules used in two previous studies were particularly helpful in constructing the present schedule. The studies are: Kutner *et al.*, *op. cit.* (schedule pp. 270-293); and Carol Larson Stone and Walter L. Slocum, *A Look at Thurston County's Older People* (schedule available on request).

²³Copies of the interview schedule used in the present study are available on request.

²⁴Omitted from consideration in the present study were persons 65 and over living in one large and two small institutions for older persons located in Dell Rapids.

older persons lived, the interviewers were instructed to visit every house in the selected sample blocks to determine whether or not there were any older persons living in them. The necessity of making inquiries at every door suggested the feasibility of an age and sex census of the community. Consequently, interviewers were equipped with pads to record the total persons in every household as well as their age and sex. The method served as a ready introduction at every door and provided a relatively accurate and current basis for studying the population structure of the community. The interviewer merely indicated to every householder that he was interested in finding out the age and sex of every person living in the household, and that he would like to talk further with anyone 65 or older. All households in multiple dwelling units were covered separately by the interviewers.

In some cases where the occupants of a household were not at home, neighbors could give the interviewers approximations of the ages of persons in the household, and in a few cases this information was the best obtainable. Where age estimates gained by such methods left any doubt as to whether a person was eligible for interviewing, every attempt was made to contact the individual personally. A minimum of three callbacks was made to all households thought by neighbors to contain persons eligible for interviewing. In the cases of households with husbands and wives both 65 or over, both were inter-

viewed, each without the presence of the other when possible.

Advance publicity on the nature of the study in the local newspaper helped make the interviewers well received for the most part. Some interviews were conducted in the evenings and on Saturdays to facilitate coverage of employed persons.

Although it was originally anticipated that a 50% area sample would provide the desired number of schedules, this did not prove to be the case. The 50% sample contained 47% of the persons 65 and over in the community (this fact is known since the census previously referred to was carried on to cover the whole community), but the number of persons 65 or older in this sample was only 132. Consequently, the interviewing was extended (after the 50% area had been entirely covered) to include the 60 and 70% sample areas. While the total of persons of 65 and over living in the inclusive 70% sample area was found to be 198, not all eligible persons in this sample were interviewed. A total of 155 schedules were taken in the study, 144 of which proved to be usable. The eleven unusable schedules were taken from respondents who were hard of hearing or for other reasons provided little information of value. The reasons for failure to interview the remaining 43 eligible respondents are outlined below:

Reason	Number of Eligible Non-Respondents
Refused	16
Ill or incompetent	7
Other reasons (traveling, never at home, etc.)	20
Total	43

The Method of Analysis

The next section of this bulletin, "Measuring Personal Adjustment: Guttman Scale Methods," contains a detailed account of the methods used in deriving the Guttman scale of personal adjustment which is the analytic tool employed to measure the dependent variable, personal adjustment. The scale provides a basis for classifying respondents according to whether they illustrate a high or low degree of personal adjustment. In the following sections, hypotheses on the relationship of personal adjustment and such factors as health, economic circum-

stances, etc., are then offered and tested by the Chi Square criterion.

The present study does not have as its central aim the presentation of findings regarding the "characteristics" of the sample. The number of persons in the present study who are sick or healthy, rich or poor, and so on, is frequently revealed in the present analysis, but is of only secondary interest to the purpose at hand. Analysis will be aimed primarily at discovering the relative differences in the health, income, etc., of respondents in high and low personal adjustment categories.

Measuring Personal Adjustment: Guttman Scale Method

Theory of the Guttman Scale

In accordance with the theoretical framework for understanding personal adjustment previously discussed,²⁵ it is assumed in the present study that a measurement of attitudes contributing to morale also measures, to a large extent, the life adjustment of the individual.

The method for measuring attitudes used in this study is the attitude scale. An attitude scale is a device for determining whether a person is higher or lower, more favorable or less favorable than other persons in regard to a single attribute—in the present case, morale.²⁶ Using a scale enables an investigator to consolidate responses to a number of questions bearing on the central attitude being measured, rather than placing reliance in a single attitude item. A single score can be derived from these responses for each individual, and the scores can then serve as a basis for placing individuals on an attitude continuum.

The model for attitude measurement used in this study is the Guttman scale. The basic problem in constructing an attitude scale by the Guttman technique is to select items or questions so that all persons who answer a given question affirmatively will have higher ranks than those who answer it negatively.²⁷ One manner of illustrating this

basic feature of a Guttman scale is to consider the items in terms of how “easy” or how “hard” they are to answer “correctly.” When the items are put in progressive order of difficulty, persons able to answer a “hard” question should have been able, also, to answer “correctly” the preceding “easy” items. Suppose, for example, that we have a five-item scale. The questions are put in order of increasing difficulty and a score is given for each “correctly” answered question. We could predict that an individual with a total score of three had “correctly” answered the first three items and had “missed” the harder fourth and fifth items. When such predictions are possible from a scale, the scale is said to be unidimensional. Single items in the scale include as **much and more** of the variable being measured as do other items of lesser rank, and the single score derived from such items is assumed to be measuring one dimension or qual-

²⁵See “Framework of the Study” section of this bulletin.

²⁶Matilda White Riley *et al.*, *Sociological Studies in Scale Analysis*, p. 273.

²⁷An extensive statement of Guttman scale theory is to be found in Samuel A. Stouffer *et al.*, *Studies in Social Psychology in World War II*, Vol. IV, *Measurement and Prediction*, chapters 1-6. For briefer explanations see: Kutner *et al.*, *op. cit.* 299-310; and also C. Addison Hickman and Manford H. Kuhn, *Individuals, Groups, and Economic Behavior*, pp. 229-233.

ity (in the present case, morale) only.²⁸

It should be explicitly stated that the scalability of a set of items does not in any way define the content of a scale.²⁹ The particular dimension that is being measured by the scale cannot be determined empirically, but is subject to logical determination only. The items included in the present morale scale have been judged by other investigators³⁰ to measure morale, and have been adopted by the present investigators on this basis; that the items might measure "satisfaction," "security," or some other adjustment-indicating attitude is entirely possible. Scale analysis presumes that the content of the scale is already defined, and merely tests whether or not the content is representable by a single, cumulative variable. What the single dimension being measured should be labeled cannot be scientifically determined.

Similarly, in dealing with attitudes, we cannot measure the "correctness" or "incorrectness" of a response against some yardstick of objective truth or fact. The "correct" answers in an attitude scale are merely those which are logically judged to indicate greater morale and are given a "plus" score, while "incorrect" responses are those which are judged to indicate less morale and are left unscored. In addition, in measuring attitudes it is not possible to pre-arrange items in an order of difficulty. Items thought to bear on the attitude being measured are simply included in the questionnaire or interview sched-

ule. The scalability of the items is then empirically accomplished by arranging the items in the order of greatest to least proportion of scored responses.

In the present study the following items³¹ were judged to have direct bearing on morale and were included in the interview schedule:

	Scored "Correct" Responses	% Scoring
94. How often do you feel that there's just no point in living?	Hardly ever	87
95. I would like to know whether you agree or disagree with this statement: Things just keep getting worse and worse for me as I get older.	Disagree	86
86. In general, how satisfied would you say you are with your way of life today?	Very satisfied	78
92. How often do you find yourself regretting the way things turned out for you?	Hardly ever	62

²⁸The logic of this assumption becomes apparent when one considers the problems that would be encountered in attempting to measure more than one dimension, for example age and height, with a single, cumulative score.

²⁹Stouffer *et al.*, *op. cit.*, p. 85.

³⁰Kutner *et al.*, *op. cit.*, p. 48.

³¹Seven of the items in the present interview schedule were derived from a similar morale scale used by Kutner *et al.* in a New York study of adjustment in the later years. Question 92 is unique to the present study. (Kutner *et al.*, *op. cit.*, pp. 289-291.)

91. All in all, how much unhappiness would you say you find in life today?	Almost none	53
93. How much do you regret the chances you missed during your life to make the most out of life?	Not at all	51
88. As you get older would you say things seem to be better or worse than you thought they would be?	Better	31
90. How much do you plan ahead the things that you will be doing next week or the week after?	Many plans	20

It is obvious from the above that the "easiest" question for respondents was number 94 (since 87% gave the scored response), and that the "hardest" question was number 90 (since only 20% gave the scored response). In the preliminary phase of determining scalability it is therefore assumed that an individual giving the scored response to the hardest question (90) would also give the scored response for all other questions, and that an individual not giving the scored response to number 90 but scoring on number 88 would give scored responses to the remaining "easier" questions, and so on.

If the above ordering of items constituted a perfect scale it would be possible to accurately predict how the items were answered by an individual merely on the basis of

his score. It could be confidently stated that an individual who received a score of three endorsed the first three items and none of the rest, and that a person who scored two endorsed the first two items only. In actual practice, 100% accuracy in reproducing a response pattern from the scores of individuals is extremely rare. Some individuals, for instance, will answer the second item "correctly," but fail to score on the first, or answer the first and third "correctly" and "miss" the second. In addition, all questions are not equally scalable. In the present study it was discovered that individuals giving scored responses to items 90 and 93 did not with sufficient regularity answer all the remaining "easier" questions, thus introducing large numbers of errors into the scale. With items 90 and 93 omitted³² the remaining items proved scalable within the error limits prescribed by Guttman.

Criteria of Scalability

According to Guttman, items are arbitrarily designated as scalable providing that no more than 10% of all responses to an individual item are errors, and that error in the set of items constituting the scale does not exceed 10% of the total responses. Stated in another way, there must be a 90% probability of accurately reproducing from indi-

³²It is assumed that when items introduce idiosyncratic response patterns into an area hypothesized "scalable," that such items are measuring, to some extent, a dimension other than that intended for the scale to measure.

vidual score values the response patterns they represent.³³

A detailed explanation of the extent to which the six items constituting the adjustment scale in the present study fulfill the requirement of "reproducibility," and other Guttman scale criteria follows:

1. **The Coefficient of Reproducibility.** As mentioned previously, an array of items thought to measure a given attitude is designated scalable only if it is possible to predict with 90% accuracy the responses of an individual from his score alone. This 90% criterion is termed the "coefficient of reproducibility" and is computed in the following manner:³⁴

$$\text{Coefficient of Reproducibility} = 1 - \frac{E}{Q \times R}$$

E=Number of Errors
Q=Number of Questions
R=Number of Respondents

In the present study 68 errors were made by the 144 respondents on the six question morale scale (table 2.). The coefficient of reproducibility of .921:

$$1 - \frac{68}{6 \times 144}$$

for the present scale thus falls well within the limits of acceptability.

In addition, the coefficient of reproducibility for each question may be computed as follows:

$$\text{Coefficient of Reproducibility} = 1 - \frac{E}{R}$$

E=Number of Errors
R=Number of Respondents

Some investigators have suggested that a .85 coefficient of reproducibility for individual questions is sufficiently high for acceptability, providing total scale reproducibility is at least .90³⁵ Item reproducibility in the present scale varies from .910 on question 92 (table 2) to .938 on question 95, thus satisfying, in every case, the more rigorous .90 criterion previously mentioned.

2. **Range of Marginal Distributions: Improvement.** A high coefficient of reproducibility alone is not sufficient to lead to the conclusion that a set of items is scalable. The frequency of responses to each category of each item must also be taken into account. The reproducibility of any individual item can never be less than the percentage of respondents answering in a given category of that item, regardless of whether or not a scale exists. For example, if 80% of the respondents answer in one category of an item and 20% in the other, that item cannot be less than 20% reproducible. To guard against scale reproducibility being spuriously high because of the presence of many items with high marginal frequencies, Guttman scales must meet the criterion of "improvement."³⁶ Briefly stated, items meet the criterion of improvement if both categories of each question contain less error than non-error. But before this criterion can

³³Stouffer *et al.*, *op. cit.*, p. 117.

³⁴*Ibid.*

³⁵Riley *et al.*, *op. cit.*, p. 302.

³⁶Stouffer *et al.*, *op. cit.*, p. 288.

Table 2. Scale Summary

Question Number		Number of Responses	Error Responses	Non-error Responses	Reproducibility
94	scored category	126	2	124	.931
	unscored category	18	8	10	
95	scored category	124	4	120	.938
	unscored category	20	5	15	
86	scored category	112	7	105	.917
	unscored category	32	5	27	
92	scored category	90	5	85	.910
	unscored category	54	8	46	
91	scored category	76	10	66	.917
	unscored category	68	2	66	
88	scored category	44	12	32	.917
	unscored category	100	0	100	
Totals		864	68	796	.921

be fully understood it becomes necessary to explain in detail the nature of Guttman scale errors and the methods by which errors are counted and computed.

The six items used in the present morale scale provide the basis for establishing seven "ideal" scale types according to whether individuals answered from zero to six of the items in the scored category. Designating scored responses to items +1, the response patterns for the seven perfect scale types are as follows:

Question Number	Scale Type						
	0	1	2	3	4	5	6
94	+1	+1	+1	+1	+1	+1	+1
95		+1	+1	+1	+1	+1	+1
86			+1	+1	+1	+1	
92				+1	+1	+1	
91					+1	+1	
88							+1

Guttman's rule³⁷ for classifying individuals according to their responses is to always assign a person to a perfect scale type which will minimize the error. Consider, for example, an individual with the following response pattern:

- 94 +1
- 95 +1
- 86
- 92 +1
- 91 +1
- 88

This person would be classified as a type five individual with one scale error (the error being the failure to score on question 86). The other alternative would be to classify this individual as a scale type two with two scale errors (answers to 92 and 91 being errors), but this method of error counting would not minimize the errors. It

³⁷Riley *et al.*, *op. cit.*, p. 281.

happens sometimes that more than one scale error will be observed in the replies of an individual, as in the following example:

94
95
86 +1
92 +1
91 +1
88

Again, the rule holds to count so as to minimize the error, and the failure to respond to items 94 and 95 are counted as errors. Had the individual responded in the following manner:

94
95
86
92 +1
91 +1
88

the scored responses to items 92 and 91 would have been counted as errors, the individual still having only two errors in his response pattern.

It is apparent from the foregoing that Guttman scale errors can occur in either scored or unscored response categories. In fact, in some cases it is possible to count either a scored or unscored category as an error as in the following example:

94 +1
95 +1
86
92 +1
91
88

The individual could be classified as either a scale type four (failure to respond on item 86 is counted as

an error), or as a scale type two (response to item 92 counted as an error). Decisions as to where to count the error in such cases are made by referring to the error pattern for each question and determining which question can best "afford" the error in terms of the criterion for improvement. Suppose, for example, that an individual response pattern such as that given above occurs. The problem is one of determining whether to count the response to item 92 or the failure to respond to item 86 as the error. According to the criterion of improvement, both categories of each question must contain less error than non-error. Stated in another way, scale error must be less than half of that which would have been obtained without a knowledge of the scale pattern, that is, from the modal frequencies alone.³⁸ The unscored or negative category of question 86 (table 2) can thus have, at the most, 15 errors (total of 32 responses in this category) to be acceptable as a scalable question. The scored or positive category of question 92, on the other hand, could have as many as 45 errors and still meet the improvement criterion. The positive category of question 92 can thus much better "afford" the error than the negative category of question 86, and the error is counted accordingly.

In the present study, non-error exceeds error in every answer category for every item (table 2), thus illustrating that items in the present

³⁸Stouffer *et al.*, *loc. cit.*

scale meet the criterion of improvement. Error and non-error in each category of scale items can be counted in table 3 which provides a summary of every respondent's answers to all scale questions. Individual items, as indicated in table 3, serve as discriminatory cutting points on the attitude continuum. Item 88, the "hardest" question, discriminates or cuts scale type five individuals from scale type six persons; question 91 cuts scale type five from scale type four persons, and so on. Cutting points, or points where questions discriminate between scale types, are shown on table 3 as heavy black horizontal lines in the vertical columns. Errors are merely those X's below the cutting points in the positive (scored) categories, and above the cutting points in the negative (unscored) categories. Non-errors are those X's above the cutting points in the positive columns, and below the cutting points in the negative categories.

3. Pattern of Error. If an area is scalable with but 10% error (and not artificially so because of extreme, unimproved marginal frequencies), this implies that there is but one dominant dimension being measured. When scale items and responses of individuals are arranged as in table 3, solid segments of errors outside the cutting points indicate that elements of additional other dimensions are being measured by the items. Stated differently, when large numbers of respondents make the same kinds of errors, error is non-randomly distributed,

and the presence of such nonscale types indicates that the scale is lacking unidimensionality.³⁹ The extent to which nonscale response patterns of a given type can occur and the items still be accepted as scalable is not specifically defined in literature on the Guttman scale. Ford points out that "there is no exact measure as yet for judging the randomness of a distribution," but suggests that a scale is questionable if a given nonscale type contains over 5% of the responses.⁴⁰

Inspection of table 3 will reveal that in the present study nonscale types with exactly similar error patterns occur, but that such "streaked" error patterns are relatively infrequent and never made up of more than five respondents (for example respondents 266, 572, 381, 301, and 151 on question 88). Thus, similar nonscale types in the present study never constitute more than 3.5% of the respondents, satisfying Ford's suggested criterion for random error distribution.

4. Number of Items. A scale with a large number of items has certain advantages over a scale with only a small number of items, since a larger number of items allows delineation of more points on the continuum being measured. Although definite limits have not been set on the number of items a scale should contain, Guttman suggests that "it is probably desirable that at least ten items be used, with perhaps a lesser number being satisfactory if the marginal frequencies of several

³⁹Stouffer *et al.*, *op. cit.*, p. 119.

⁴⁰Riley *et al.*, *op. cit.*, p. 294.

Table 3. Individual Responses on Personal Adjustment Scale (continued)

Scale Type	Sched- ule Number	Number of errors	Question Number												
			94		95		86		92		91		88		
			+*	0†	+	0	+	0	+	0	+	0	+	0	
5	361	0	x		x		x		x		x		x		x
5	321	0	x		x		x		x		x		x		x
5	556	0	x		x		x		x		x		x		x
5	112	0	x		x		x		x		x		x		x
5	132	0	x		x		x		x		x		x		x
5	241	0	x		x		x		x		x		x		x
5	191	0	x		x		x		x		x		x		x
5	491	0	x		x		x		x		x		x		x
5	521	0	x		x		x		x		x		x		x
5	192	0	x		x		x		x		x		x		x
5	481	0	x		x		x		x		x		x		x
5	073	1	x		x		x			x	x		x		x
5	142	1	x		x		x			x	x		x		x
5	211	1	x		x		x			x	x		x		x
5	146	1	x			x	x		x		x		x		x
5	070	1		x	x		x		x		x		x		x
5	513	2		x		x	x		x		x		x		x
4	432	0	x		x		x		x			x		x	x
4	325	0	x		x		x		x			x		x	x
4	323	0	x		x		x		x			x		x	x
4	514	0	x		x		x		x			x		x	x
4	101	0	x		x		x		x			x		x	x
4	342	0	x		x		x		x			x		x	x
4	613	0	x		x		x		x			x		x	x
4	122	0	x		x		x		x			x		x	x
4	611	0	x		x		x		x			x		x	x
4	072	0	x		x		x		x			x		x	x
4	071	0	x		x		x		x			x		x	x
4	434	0	x		x		x		x			x		x	x
4	135	0	x		x		x		x			x		x	x
4	281	0	x		x		x		x			x		x	x
4	075	0	x		x		x		x			x		x	x
4	544	1	x		x		x		x			x		x	x
4	614	1	x		x		x		x			x		x	x
4	265	1	x		x			x	x			x		x	x
4	292	1	x		x			x	x			x		x	x
4	383	1	x		x			x	x			x		x	x
4	042	1	x			x	x		x			x		x	x
4	263	1	x			x	x		x			x		x	x
4	194	1		x	x		x		x			x		x	x
4	522	1		x	x		x		x			x		x	x
4	064	1		x	x		x		x			x		x	x
3	382	0	x		x		x			x		x		x	x
3	133	0	x		x		x			x		x		x	x
3	141	0	x		x		x			x		x		x	x
3	562	0	x		x		x			x		x		x	x
3	081	0	x		x		x			x		x		x	x

Table 3. Individual Responses on Personal Adjustment Scale (continued)

Scale Type	Schedule Number	Number of errors	Question Number													
			94		95		86		92		91		88			
			+*	0†	+	0	+	0	+	0	+	0	+	0		
3	451	0	x		x			x				x				x
3	471	0	x		x			x				x				x
3	266	1	x		x			x				x			x	
3	572	1	x		x			x				x			x	
3	381	1	x		x			x				x			x	
3	301	1	x		x			x				x			x	
3	151	1	x		x			x				x			x	
3	482	1	x		x			x				x				x
3	201	1	x		x			x				x				x
3	041	1	x		x			x				x				x
3	264	1	x		x			x				x				x
3	311	1		x				x				x				x
2	353	0	x		x			x				x				x
2	462	0	x		x			x				x				x
2	113	0	x		x			x				x				x
2	284	0	x		x			x				x				x
2	252	0	x		x			x				x				x
2	631	0	x		x			x				x				x
2	421	0	x		x			x				x				x
2	076	0	x		x			x				x				x
2	145	1	x		x			x				x			x	
2	131	1	x		x			x				x			x	
2	031	1	x		x			x				x				x
2	193	1	x		x			x				x				x
2	452	1	x		x			x				x				x
2	563	1	x		x			x				x				x
2	553	1	x		x			x				x				x
1	651	0	x			x			x				x			x
1	111	0	x			x			x				x			x
1	352	0	x			x			x				x			x
1	516	0	x			x			x				x			x
1	283	1	x			x			x				x			x
1	341	1	x			x			x				x			x
1	431	1	x			x			x				x			x
0	303	1		x					x				x			x
0	531	1		x					x				x			x
0	138	1		x					x				x			x
0	231	1		x					x				x			x
0	552	1		x					x				x			x
0	518	1		x					x				x			x
0	077	1		x					x				x			x
0	161	2	x						x				x			x
0	134	2		x					x				x			x
0	483	2		x					x				x			x
0	262	3		x					x				x			x
0	581	3	x						x				x			x

*Scored answer category

†Unscored answer category

items are in the range of 30% to 70%.”⁴¹ Subsequent users of Guttman scales, however, have used as few as three items,⁴² and Ford, writing on the Guttman scale, describes a technique for determining the scalability of six or fewer items.⁴³ The present scale, it will be noted, contains six items, three of which (items 92, 91, and 88) fall within the 30 to 70% marginal frequency range (table 2) suggested by Guttman, and must thus be interpreted to approximate closely Guttman’s somewhat rigorous (and ambiguous) item-number criterion.

5. Number of Respondents. One final criterion for the scalability of an area has reference to the number of respondents in the sample. Guttman suggests that the establishment of a scale should be based on the answers of at least 100 respondents.⁴⁴ The present scale is based on the answers of 144 respondents and therefore meets Guttman’s sample size criterion with ease.

In summary, the following criteria have been established for determining whether an array of questions constitutes a Guttman scale:

1. Every item and the total scale must have at least a .90 coefficient of reproducibility.
2. Individual items must show improvement from marginal frequency distributions. Non-error must exceed error for each category of each item.
3. Error must be randomly distributed for each category of each item.
4. Although an indefinitely stated and liberally interpreted criterion, Guttman felt that scales of less than ten items should contain “several items” with 30-70% marginals.

5. Scale establishment should be based on a sample of not less than 100 respondents.

As mentioned in the foregoing text, the present morale scale falls within the limits of acceptability for all the above criteria, and thus forms a Guttman scale.

High and Low Personal Adjustment

The present scale provides a basis for placing respondents on a seven point personal adjustment continuum, according to whether they “scored” on from zero to six of the scale items. The number of respondents receiving scores in each of the seven possible adjustment categories is as follows:

Scale Score	Number of Respondents	% of Respondents
0	12	8.3
1	7	4.9
2	15	10.4
3	17	11.8
4	25	17.4
5	36	25.0
6	32	22.2
	144	100.0

To facilitate analysis, respondents in the present study were dichotomized into low and high adjustment groups. Those respondents receiving scale scores of zero, one, two, and three were arbitrarily placed in the low adjustment group, and re-

⁴¹Stouffer *et al.*, *op. cit.*, p. 79.

⁴²See Kutner *et al.*, *op. cit.*, pp. 303-305; and also Phillips, “A Role Theory Approach to Adjustment in Old Age,” p. 213.

⁴³Riley *et al.*, *op. cit.*, p. 285.

⁴⁴Stouffer *et al.*, *op. cit.*, pp. 277-280.

spondents scoring four, five, and six were placed in the high adjustment category. While necessary for purposes of analysis, the system has certain inherent shortcomings. Respondents scoring three on the scale exhibit only a slightly poorer degree of adjustment than those scoring four, but, nevertheless, respondents in the three group are put into the low adjustment category while those scoring four become a part of

the high adjustment group. The semantic injustice performed by such discriminatory labeling is apparent. Consequently, respondents in the low adjustment category should be thought of as exhibiting a lower **degree** of measured adjustment than those in the high adjustment category. The difference between many of the respondents in the high and low categories is undoubtedly small.

Findings of the Study

Introduction

The purpose of the present section is to report the findings of the present investigation on the relationships between such factors as health, marital status, economic circumstances, etc., and the personal adjustment of the respondents. The procedure for presenting the findings will be as follows:

1. A statement of the hypothesis concerning the nature of the selected factor and personal adjustment, and a statement on the derivation of the hypothesis will be presented.

2. The hypothesis, stated in its null form for testing, will be presented.

3. The data for testing the hypothesis will be presented and discussed in terms of the extent to which it tends to confirm or reject the null hypothesis. The hypothesis that there is no significant relationship between the independent variables and personal adjustment will be rejected to the degree that the differences between persons with high and low personal adjustment approach statistical significance at the Chi Square .05 level. To the extent that the statistical criteria give some basis for considering the direction of the findings, comments on the extent to which the direction of the findings tends to confirm or reject the positive hypothesis will follow.

4. A discussion of the discovered relationships or their absence, their limitations, their implications, and

the further hypotheses they suggest will then ensue.

Health and Adjustment

1. **The Hypothesis.** Previous investigators have consistently discovered that the relationship between various indications of good health and personal adjustment is a positive one.⁴⁵ Indeed, sociological insight is not required to posit the hypothesis that measures of good health and measures of high personal adjustment will be positively related. The null hypothesis tested was: there is no significant relationship between self-evaluations of health and personal adjustment as measured by morale.

2. **The Findings.** To test the hypothesis a health index was derived by awarding one point each to responses indicating a positive evaluation of health on the following items:

Item	Response (s) scored one point on health index
1. Would you say that your health at the present time is:	excellent good
2. Has your health gotten better or worse the last five years, or has it stayed about the same?	better same
3. How would you compare your health now with what it has been during your life? Would you say it is now better, worse, or about the same?	better same

⁴⁵See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

medical science), concluded that "older people cannot be said to be ignorant of their health condition."⁴⁸

Still another pertinent question may be raised concerning the validity of the present health index. It will be noted that both "better" and "same" answers to items two, three, and four in the present health index are scored as being indicative of a positive health evaluation. Yet, it appears clear that a person who indicates that his health is the same as during his earlier life is not necessarily healthy, since this person's entire life may have been characterized by poor health. However, an analysis of the individual questions and the relationship of answer categories to adjustment revealed that a disproportionately large share of those persons answering in the "same" categories for these questions were in the high adjustment category. This suggested the hypothesis that the absence of a change in health status (as indicated by "same" answers) is positively related to adjustment, and the decision to classify "same" answers as indicative of positive health orientation was made on this basis.

Marital Status and Adjustment

1. **The Hypothesis.** The findings of Schmidt, Shanas, Phillips, Kutner, and Cavan suggest the hypothesis that marriage and adjustment in old age are positively related.⁴⁹ While previous studies have generally indicated that married persons exhibit better adjustment than either single, widowed,⁵⁰ divorced, or separated persons, the limited

Table 5. Adjustment According to Marital Status

Personal Adjustment	Marital Status		Total	
	Married	Widowed	Number	%
Low	49	51	45	100
High	66	34	87	100
$X^2 = 3.4127$ $P > .05$				

number of single, divorced, and separated persons in the present sample (a total of 12) precludes a comparison of the adjustment characteristics of any but the married and widowed. The null hypothesis tested was: there is no significant relationship between persons with married and widowed status and their personal adjustment as measured by morale.

2. **The Findings.** Data for the present study on the differential adjustment characteristics of married and widowed persons is found in table 5. A disproportionately large share of married persons is in the high adjustment category, while a disproportionately large share of widowed persons is in the low adjustment category. The differences shown in table 5 are in the expected direction, and fall only slightly outside the .05 level (Chi Square value for the .05 level must be 3.841 or more). Consequently there is considerable basis for rejection of the null hypothesis. The relatively high

⁴⁸Kutner *et al.*, *op. cit.*, p. 146.

⁴⁹See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

⁵⁰The term "widow" as used in this study refers to both men and women who have lost their spouse by death.

level of significance obtained would tend to confirm the previously mentioned investigators' findings that marriage and adjustment are positively related.

3. **Discussion.** The evidence presented on the relationship between marriage and adjustment in old age does not solve the interesting question as to whether marriage contributes to adjustment, or whether the order is reversed: that unstable, maladjusted persons are less acceptable as mates, and for this reason are not so likely to marry. That enduring marriage relationships are both selective of individuals with high adjustive capacity, and in turn contribute toward personal adjustment seems likely. Coleman, writing on the contribution of the marriage relationship to adjustment, states:

The individual's stress tolerance is undoubtedly strengthened by the teamwork, group identification, and mutual emotional support received in a healthy marriage. Family life brings interesting and stable social relations, and thus can alleviate feelings of isolation and individual helplessness, and child-rearing brings self-obliterating responsibilities and duties and the feeling of being needed. Children also provide normal and healthy interests as well as greater security for the crucial period of old age.⁵¹

The phenomenon of children providing "greater security for the crucial period of old age" is, according to Dinkel, a disappearing one, and "the obligation of children to support aged and needy parents is apparently no longer well established

in the mores."⁵² Consequently, whatever this change may detract from the adjustment value of marriage must be considered in assessing the total contribution of marriage to adjustment. Regarding the maladjustive potentials of widowhood Kutner *et al.* state:

Although widowhood may occur early in marriage and in the younger years, the vast majority of the widowed are older people. The acute shock of losing one's spouse has far-reaching repercussions in the emotional life of the individual but its ramifications extend into all phases of his or her life. It often means the severance of a fundamental relationship that has given stability and meaning to life. Since the two personalities are frequently very closely intertwined, the separation by death may leave an enormous emptiness in the life of the survivor that requires a long period of readjustment. Frequently, the individual is not quite the same person: the spouse is so much a part of the social self that the widowed person, lacking the stimulus that was so much a part of personality, is changed, perhaps permanently. The mutual fulfillment of emotional, sexual, and social needs is suddenly terminated. If the person is emotionally dependent upon the departed spouse, the affective impact of the loss may be irreparable. In the case of the dominant individual new expressive outlets are now required. The widow or widower occupies a

⁵¹James C. Coleman, *Abnormal Psychology and Modern Life*, pp. 245-246.

⁵²Robert M. Dinkel, "Attitudes of Children Toward Supporting Aged Parents," *American Sociological Review*, 9 (1944), p. 378.

special place in our society; a new role must be assumed. Grief and bereavement must be contained and an attempt made to integrate this role with the ongoing social world. Economic hardship, isolation, cessation of social participation, closer ties with other family members or friends, changed housing needs, and altered domestic activities may be consequences.⁵³

Thus it would appear that the sudden changes engendered by loss of spouse may require adjustments that some older people cannot manage. However, Kutner *et al.*, found evidence that as the length of widowhood increased there was an accompanying rise in morale.⁵⁴

Employment and Adjustment

1. **The Hypothesis.** Evidence for the hypothesis that employment contributes to adjustment is offered by the research findings of Jean and Joseph Britton, Phillips, and Kutner.⁵⁵ Kutner's findings, however, suggest the broader hypothesis that it is not employment as such that contributes to adjustment in old age, but rather the presence of a meaningful and significant role.⁵⁶ While meaningful roles for men in American society may be, as Parsons⁵⁷ has pointed out, provided primarily by jobs, similarly significant roles for women are found in the married woman's role of keeping house and providing food, clean clothing, and companionship for her husband, as well as assuming the greater share of the family's child rearing burden. Within this conceptual framework it is hypothesized that (1) men actively en-

gaged in jobs will tend to exhibit higher morale than retired men, and (2) married housewives will tend to exhibit higher morale than non-working widowed housewives.

The null hypotheses tested were (1) there is no significant relationship between employed and retired older men and personal adjustment as measured by morale; and (2) there is no significant relationship between married housewives and non-working widowed housewives and personal adjustment as measured by morale.

2. **The Findings.** The findings on the relationship of these "employment" statuses and adjustment are presented in tables 6 and 7. The findings are statistically non-significant, and consequently the null hypotheses cannot be rejected. Moreover, the findings for men (table 6) are in the opposite direction from what would be expected from the hypothesis. While it would be expected that a disproportionately large share of the employed men would be in the high adjustment category, the reverse is true: a disproportionately large share of retired men is in the high adjustment group. The findings for women conform to the expected pattern: a disproportionately large share of

⁵³Kutner *et al.*, *op. cit.*, pp. 62-63.

⁵⁴*Ibid.*, p. 67.

⁵⁵See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

⁵⁶Kutner *et al.*, *op. cit.*, pp. 72-90.

⁵⁷Talcott Parsons, "Age and Sex in the Social Structure of the United States," *American Sociological Review*, 7 (1942), pp. 604-616.

Table 6. Adjustment According to Employment Status (Men)

	Employment Status		Total*	
	Em- ployed Men	Retired Men	Number	%
Low	47	53	15	100
High	35	65	37	100

$X^2 = .5998 \quad P > .05$

*Four men in the sample did not consider themselves either retired or employed, but rather unemployed or temporarily out of the labor force, and were not included in this analysis.

widowed housewives is in the low adjustment category, while the reverse is true for married housewives.

3. Discussion. Present findings on the relationship between various "employment" statuses and adjustment are not statistically significant, and, if anything, would tend to contradict the assertion that retirement and its attendant loss of role contributes to maladjustment in old age. While the nature of the findings is inconclusive, several questions concerning the relationship would appear to warrant further research consideration:

(1) To what extent does planning for retirement temper whatever maladjustive influence loss of the working role may bring?

(2) To what extent do satisfactory economic circumstances, good health, and pleasant living arrangements provide compensations for the loss of the work role in retirement?

(3) To what extent do the frequent opportunities of farm people

to gradually relinquish their work roles to children allow better opportunities to adjust to the retired status?

(4) To what extent does the frequent phenomenon of retirement from farming to provide land and buildings for children as compared to retirement at 65 because of arbitrary company policy contribute to greater feelings of self-esteem among retired farm people?

(5) To what extent has retirement become a psychological ideal which may result in an ego loss among those financially unable to terminate their employment?

(6) To what extent does rental and supervision of farm property provide a satisfying and meaningful role for farm people retiring in small towns such as Dell Rapids? Many older men in the present sample considered themselves retired, but still owned and supervised the rental and operation of their farms.

These and other questions must be investigated before the exact contribution of various "employment" statuses to adjustment can be assessed with accuracy.

Table 7. Adjustment According to "Employment" Status (Women)

	Employment Status		Total*	
	Married House- wives	Widowed House- wives	Number	%
Low	44	56	32	100
High	53	47	45	100

$X^2 = 2.3342 \quad P > .05$

*Eleven women in the present sample were employed and/or single, divorced, or separated, and were not included in this analysis.

Economic Circumstances and Adjustment

1. **The Hypothesis.** The unmistakable implication in public attempts to provide financial assistance to older persons is that a good deal of their problems can be solved by providing them with economic security. The hypothesis that economic circumstances conducive to security are related to personal adjustment in old age is, generally speaking, supported by the findings of Joseph Britton, Jean and Joseph Britton, Shanas, Cavan, and Kutner, although Havighurst and Albrecht found no such relationship.⁵⁸ To test the proposition with the present data, the following null hypothesis was tested: there are no significant relationships between various indications of economic circumstances and personal adjustment as measured by morale.

2. **The Findings.** The task of gathering reliable income data from older persons is a difficult one. Not fully cognizant of the motives of the interviewers, respondents frequently refused to comment specifically on their financial situation. Some respondents apparently felt ashamed to reveal their indigent circumstances, others apparently refused out of fear that the information might somehow affect their Old Age Assistance or Survivors Insurance checks. Consequently, findings in four areas which are indicative of the economic circumstances of respondents are presented, rather than placing reliance on quantitative income measures alone. In addition to the information available on in-

comes, the present section gives information on sources of income, respondents' evaluations of their standard of living, and quantities of conveniences and appliances.

Table 8 presents the findings on income and adjustment. While the findings reach statistical significance and suggest that the null hypothesis should be rejected, they present an unclear picture of the relationship of income and adjustment. Persons reporting extremely low incomes (less than \$50 per month) show the expected pattern: a disproportionately large share is in the low adjustment category. However, the opposite relationship is found among those with only slightly higher incomes (\$51 to \$100 per month), but for persons reporting incomes from \$101 to \$150 per month the relationship is again reversed: a disproportionately large share of these individuals in the lower adjustment category. The highest income category (over \$150 per month) conforms to what would be

Table 8. Adjustment According to Income*

Personal Adjustment	Income (Per Month)				Total	
	Less than \$50 %	\$51 to \$100 %	\$101 to \$150 %	\$151 and over %	Number	%
Low	40	23	20	17	35	100
High	20	46	10	24	63	100

$X^2=8.5914$ $P<.05$

*The table reports individual income. The total income of married couples was divided by two to obtain an individual income figure for each.

⁵⁸See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

expected: a disproportionately large share of respondents is in the high adjustment group. Hence, the findings lend but little support to the contention that higher incomes are related to higher adjustment, since only the extremes of the income categories conform to the expected pattern. That the findings are affected by the failure to get income information from 46 of the 144 respondents seems a likely possibility.

While almost one-third (46 of 144) of the respondents refused to specify the amounts of their income, nearly all specified the sources from which they received their income. This data presents certain opportunities for analysis, at least at the extremes, since individuals dependent on their children or friends for support might be thought to be in more adverse economic circumstances than persons deriving their income from property or land rental or other investments. Table 9 presents a comparison of the adjustment characteristics of persons receiving support from investments and those dependent upon assistance from friends or relatives. A disproportionately large share of persons receiving assistance from friends or relatives is in the low adjustment category, while a disproportionately large share of those who receive income from their investments is in the high adjustment category. The results are significant at the .05 level, and in the expected direction if it may be assumed that the categories are indicative of economic circumstances.

Another indication of the eco-

Table 9. Adjustment According to Source of Income

Personal Adjustment	Source of Income		Total	
	Investments, Rentals %	Assistance from Family, Friends %	Number	%
Low	60	40	35	100
High	80	20	64	100
$X^2 = 4.4218$ $P < .05$				

nomical circumstances of respondents was derived by awarding one point each to answers indicating an essentially favorable evaluation of one's standard of living and economic circumstances on the following items:

Item	Response(s) scored one point on standard of living index
1. Would you say your standard of living is better or worse or about the same as most of your friends and acquaintances?	same better
2. Would you say that your standard of living is better today, that is, are you better off now, or worse off than during most of your lifetime?	same better
3. Which one of these have enough statements best describe your ability to get along on your income?	to live comfortably more than enough to live comfortably

On the basis of their scores respondents were dichotomized into "low" (zero and one point) and "high" (two and three point) stand-

Table 10. Adjustment According to Standard of Living Index Rating

Personal Adjustment	Standard of Living Index		Total	
	Low %	High %	Number	%
Low	20	80	51	100
High	3	97	93	100

$X^2=10.7632 P<.05$

ard of living groups. A comparison of the adjustment characteristics of these groups appears in table 10. The findings are significant at the .01 level, and in the expected direction: a disproportionately large share of respondents with high self-evaluations of their standard of living is in the high adjustment group while a disproportionately large share of respondents with low standard of living index rating is in the low adjustment group.

A final indication of economic circumstances is provided by the number of conveniences and appliances to which respondents have access in their households. Home conveniences include piped hot water, bath or shower, modern toilet, electricity, and central heating. The data on home conveniences and adjustment are presented in table 11. Home appliances include gas or electric range, dishwasher, automatic or wringer washer, clothes drier, refrigerator, home freezer, telephone, radio, and television. The data on home appliances and adjustment are presented in table 12.

The relationships between adjustment and the number of appliances and conveniences are in the same direction, though neither

shows statistical significance. A disproportionately large share of respondents with from 1-3 conveniences and 0-4 appliances is in the low adjustment category, while a disproportionately large share of those with a larger number of conveniences and appliances is in the high adjustment group. These relationships, however, do not appear when persons with 1-2 conveniences are compared with persons with 3-5 conveniences, nor when persons with 0-3 appliances are compared with those having 4-8 appliances, suggesting that the aforementioned relationship may be a function of categorization. Thus, to the extent that quantities of conveniences and appliances are indicative of more favorable economic circumstances, the findings lend little and questionable support to the hypothesis.

3. Summary and Discussion. The present analysis of the relationship between economic circumstances and adjustment was based on four measures thought indicative of the respondent's economic circumstances. The findings may be summarized as follows: three of the four measures thought indicative of economic circumstances provide statistically significant evidence

Table 11. Adjustment According to Number of Conveniences

Personal Adjustment	Number of Conveniences		Total	
	1-3 %	4-5 %	Number	%
Low	29	71	51	100
High	19	81	93	100

$X^2=1.8856 P>.05$

Table 12. Adjustment According to Number of Appliances

Personal Adjustment	Number of Appliances		Total	
	0-4 %	5-8 %	Number	%
Low	24	76	51	100
High	14	86	93	100
$X^2 = 2.0941$ $P > .05$				

that the hypothesis of no relationship between economic circumstances and adjustment should be rejected. Two of these measures provide evidence that more favorable economic circumstances are related to higher morale.

Despite the fact that income information on respondents is scant, and perhaps unreliable, interesting questions are suggested by the erratic relationship between income and adjustment shown in the findings. One might, for instance, venture the hypothesis that, at least above the subsistence level, the adequacy of income is in large measure dependent upon what the individual considers to be his economic needs. Two individuals with approximately the same income may vary considerably in the way they evaluate the adequacy of the income. Status considerations may make a \$150 per month income perfectly adequate for a retired plumber and his wife, while the same amount may not allow a retired accountant and his spouse to have the type of home, clothing, auto, entertainment, etc., that they consider commensurate with their social position. At any rate, the general hypothesis that the individual's evaluation of the ade-

quacy of his income is important as well as the actual amount of the income, bears further research consideration.

Activities and Adjustment

1. **The Hypothesis.** The research findings of Schmidt, Burgess, Scott, Albrecht, Joseph Britton, Jean and Joseph Britton, Shanas, Cavan, and Kutner all contribute evidence to the hypothesis that activities of various sorts contribute to the adjustment of older persons.⁵⁹

The null hypothesis tested was: there are no significant relationships between measures of involvement in various activities and personal adjustment as measured by morale.

2. **The Findings.** In order to measure the degree of involvement in activities, each respondent was given one point if he presently engages in the following:

1. Working in the garden or yard (p).
2. Working in and around the house (p).
3. Working on a hobby (p).
4. Writing letters (s) (p).
5. Going to movies (p).
6. Attending clubs, lodges, other meetings (s).
7. Shopping (p).
8. Helping with community work (s).
9. Helping with church work (s).
10. Playing cards or other table games (s).
11. Riding in a car (p).
12. Walking (p).

⁵⁹See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

13. Visiting friends and relatives (s).
 14. Entertaining friends and relatives (s).
 15. $\left\{ \begin{array}{l} \text{(Women only) Sewing, knitting, crocheting (p).} \\ \text{(Men only) Fishing, hunting, golf (p).} \end{array} \right.$
 16. Watching television (p).
 17. Listening to radio (p).
 18. Reading (p).

An additional point was given to respondents reporting attending three or more club, organization, or church meetings per month. Scores derived by this method provide a "total activities index" for each respondent (19 possible total points).

While the dichotomization of activities into "social" and "personal" categories is an immense oversimplification, and provides at best a rough indication of participation in these two types of activities, the same procedure was used to derive a "social activities index" score and a "personal activities index" score for each respondent from the list of items. Activity items on the list followed by the symbol (s) frequently are done with other persons, and are frequently participated in for their social content, and were used to derive the social activities index score. In addition, the criterion of attending three or more organizational meetings per month was awarded one point on the social activities index, making a total of eight points possible.

Items followed by (p) are frequently done individually, and are frequently participated in more for the content of the activity than for social pleasure, and were used to

Table 13. Adjustment According to Total Activities Index Rating

Personal Adjustment	Total Activities Index Rating		Total	
	Low* %	High† %	Number	%
Low	37	63	51	100
High	30	70	93	100
$X^2 = .7652 \quad P > .05$				

*Low=scores from 0-9 on total activities index.
 †High=scores from 10-19 on total activities index.

derive the personal activities index score (12 possible points). Since the activity of writing letters always has both social and personal content, it was included in both indexes.

The findings on the relationships between total, personal, and social activities index ratings and adjustment are presented in tables 13, 14, and 15, respectively. The findings show no statistical significance; however, their direction is consistent: a disproportionately large share of respondents with low activity index ratings⁶⁰ is in the low adjustment category, and a disproportionately large share of respondents with high activity index ratings is in the high adjustment category. It is also worth noting that the comparison of social activity index ratings and adjustment shows a slightly higher level of significance than

⁶⁰Categorization does not affect these findings. When persons scoring six points on the personal adjustment index are placed in the high activities group and persons scoring four points on the social activities index are placed in the high activities group the finding remain in the same direction, and remain non-significant.

Table 14. Adjustment According to Personal Activities Index Rating

Personal Adjustment	Personal Activities Index Rating		Total	
	Low* %	High† %	Number	%
Low	49	51	51	100
High	43	57	93	100
$X^2 = .7384$ $P > .05$				

*Low=scores from 0-6 on personal activities index.

†High=scores from 7-12 on personal activities index.

either the personal activities or the total activities findings.

3. **Discussion.** One writer has suggested that older people should "be as active as possible within their physical limitations."⁶¹ Indeed, Cavan *et al* suggest the use of activity levels as a partial criterion of personal adjustment in old age.⁶² Commenting on the contribution of sheer activity to personal adjustment Kutner *et al* state:

Not to be overlooked, however, is the possibility that through sheer activity the individual may incidentally find outlets for his feelings or find social relationships that might

Table 15. Adjustment According to Social Activities Index Rating

Personal Adjustment	Social Activities Index Rating		Total	
	Low* %	High† %	Number	%
Low	55	45	51	100
High	45	55	93	100
$X^2 = 1.2508$ $P > .05$				

*Low=scores from 0-4 on social activities index.

†High=scores from 5-8 on social activities index.

provide the key to satisfying some of his more fundamental needs. The probability of fortuitously uncovering hidden resources or of developing hidden personal resources or of developing meaningful relationships with others is greater among persons who involve themselves or are drawn into activities than would be the case with the withdrawn or seclusive person.⁶³

Although the present findings on activities and adjustment do not reach statistical significance, they give slight substantive support to the contention that activities of various sorts contribute to personal adjustment. The present dichotomization of activities into social and personal categories has certain logical shortcomings, but nevertheless provides the broad suggestion that not all types of activities contribute equally to adjustment. Activities can be variously classified as social, personal, thrill, spectator, participant, group, solitary, physical, mental, and so on, and the contribution of various types of activities to personal adjustment in aging would appear to warrant further research consideration.

One specific limitation of the present findings on activities and adjustment merits special comment. The present activity indexes measure involvement in activities primarily in terms of the **number** of activities respondents engage in, and excludes consideration of the **intensity** of the involvement in the vari-

⁶¹Herbert A. Carroll, *Mental Hygiene*, p. 96.

⁶²Cavan *et al.*, *op. cit.*, p. 103.

⁶³Kutner *et al.*, *op. cit.*, p. 104.

ous activities. While a measure of the number of activities a person is engaged in provides some insight into his "activity" status, another important facet of the problem is the degree to which the person is involved in each of his activities.

Isolation and Adjustment

1. **The Hypothesis.** Widowhood, chronic illness, declining levels of physical activity, and retirement all are situations which carry the potential for a declining range of social relationships with work associates, friends, neighbors, and relatives. Although it is easy to assume that reduced social contacts may often result in loneliness, loss of morale, and concomitantly, poorer adjustment, the research evidence on this point is contradictory. While the findings of Schmidt and Scott support the contention that decreasing contacts with friends results in a poorer adjustment, Phillips and Kutner found no relationship between the frequency of interaction with friends, children, and relatives and adjustment.⁶⁴ To test the proposition that social isolation is related to poor adjustment, the following null hypothesis was tested: there are no significant relationships between various measures of social isolation and personal adjustment as measured by morale.

2. **The Findings.** Social isolation was measured in the present study by the use of an index of isolation. Responses to the following items which indicated a relatively limited range of social relationships were awarded one point:

Item	Response (s) scored one point on isolation index
1. Do you associate with certain close friends who often visit each other or do things together?	no
2. About how many meetings or gatherings of clubs or organizations do you attend each month, including church?	two or less
3. Would you say that most of the people who have been your close friends are living, only some of them, or almost none?	almost none
4. I'd like to have you think of the friend that you know best here in Dell Rapids. How often do get to see that friend?	haven't such a friend
5. Do you think that older people have more difficulty in making friends than younger folks, or is it easier for older folks to make friends?	older people have difficulty making friends
6. Do you ever find yourself wishing you could meet new friends?	often sometimes

Thus, the higher the score, the greater the isolation. Table 16 shows the adjustment characteristics of the respondents when they are dichotomized on the basis of their isolation index ratings. The low level of significance obtained ($p < .70$)

⁶⁴See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

Table 16. Adjustment According to Isolation Rating

Personal Adjustment	Isolation Index Rating		Total Number	%
	More Iso- lated*	Less Iso- lated†		
	%	%		
Low	45	55	51	100
High	40	60	93	100

$X^2 = .3825 P > .05$

*More isolated=scores from 3-6 on isolation index.

†Less isolated=scores from 0-2 on isolation index.

gives no basis for rejection of the null hypothesis that social isolation and adjustment are not related.⁶⁵ A further picture of the relationship of social isolation and adjustment is provided in tables 17, 18, and 19 which present the findings on adjustment according to the visiting frequencies of children, relatives, and friends, respectively.

The levels of significance for all the tables are extremely low, and give no basis whatever for rejecting the null hypothesis.

Table 17. Adjustment According to Visiting Frequency of Children

Personal Adjustment	Visit Once a Week	Visit Less Than Once a Week	Respondents With No Children*	Total Number	%
	or More %	%	%		
	Low	53	31		
High	50	30	20	93	100

$X^2 = .4914 P > .05$

*Includes married, single, divorced, and widowed persons without children.

3. Discussion. Although it might be expected that frequent social relationships with friends, children, and other relatives would be conducive to better adjustment among older persons, the present evidence provides no substantiation for this proposition. One can only speculate as to the factors involved in this phenomenon. Kutner *et al* suggest that:

Involved, perhaps, is friction between the generations or about suggestions to the older person for maintaining the youthfulness and health which are highly prized among this group. Or, perhaps, the contrast between the two generations many emphasize for the older person that which he would deny—his own aging.⁶⁶

To keep up with the rapid social changes, the emphasis on the new and the novel which characterize American society, requires resources which many older persons find themselves increasingly lacking; the attributes of good health such as eyesight, hearing and physical energy; financial abilities to purchase new products and develop new consumption habits. Yet, to lag physically and mentally behind the times invites invidious comparison of oneself with others. That such comparisons will be more often generated when one has frequent contacts with others seems likely,

⁶⁵Categorization does not affect these findings. When persons scoring three points on the isolation index are placed in the less isolated group the findings remain in the same direction, and remain non-significant.

⁶⁶Kutner *et al.*, *op. cit.*, p. 122.

Table 18. Adjustment According to Visiting Frequency of Relatives*

Personal Adjustment	Visit Once a Week	Visit Less Than Once a Week	Respondents With No Relatives	Total	
	or More %	%	%	Number	%
Low	35	22	43	51	100
High	37	17	46	93	100

$X^2 = .4866$ $P > .05$

*Includes only relatives other than children.

particularly when such relationships are with younger persons. Moreover, persons of advancing age are increasingly faced with the death and disablement of peers, a factor which increases their dependence on younger persons for social contacts. Consequently, with advancing years the "generational gap" is likely to be made all too apparent to older persons in their interpersonal relationships, and at a time when their resources for closing the gap are increasingly scant.

Thus there would appear to be some theoretical basis for accounting for the over-all lack of a relationship between social isolation

Table 19. Adjustment According to Visiting Frequency of Friends

Personal Adjustment	Visit Once a Week	Visit Less Than Once a Week	Respondents Having No Friends	Total	
	or More %	%	%	Number	%
Low	76	10	14	51	100
High	78	7	15	93	100

$X^2 = .5417$ $P > .05$

and adjustment. It remains for future researchers to test the proposition that the positive contributions of social relationships for older persons may be counter-balanced by the negative elements in such relationships.

Age, Age-Conceptions, and Adjustment

1. **The Hypothesis.** The hypothesis that advancing chronological age makes adjustment more difficult is supported by the research findings of Jean and Joseph Britton, Phillips, Kutner, and Cavan. Although Havighurst and Albrecht found no relationship between actual age and adjustment, their findings agree with the evidence offered by Shanas, Mason, Phillips, and Kutner that persons who conceive of themselves as old exhibit poorer personal adjustment.⁶⁷ Consequently, the hypothesis in the present section is that both advancing chronological age and self-conceptions of being old will be negatively related to adjustment. The null hypothesis tested was: there are no significant relationships between either actual age or self-conceptions of age and personal adjustment as measured by morale.

2. **The Findings.** Table 20 gives the present findings on the relationship of chronological age and adjustment. The findings are not statistically significant, and show no consistent tendencies for persons of advanced age to exhibit low adjust-

⁶⁷See "Summary of Previous Research Findings" section of this bulletin, pp. 9-13.

Table 20. Adjustment According to Chronological Age

Personal Adjustment	Age				Total Number	%
	65 to 69	70 to 74	75 to 79	80 and Over		
Low	26	41	16	17	51	100
High	37	26	17	20	93	100

$X^2 = 3.9032 P > .05$

ment. A comparison of the extremes of the age categories appears in table 21. While a disproportionately large share of persons 65 to 69 years old is in the high adjustment category, and a disproportionately large share of persons 80 and over is in the low adjustment category, the findings are not significant, and give no basis for rejecting the hypothesis that actual age and adjustment are not related.

To obtain an indication of how respondents conceived of themselves so far as age is concerned, the following question was asked: "I'd like to know how you think of yourself so far as age goes: Do you think of yourself as middle aged, elderly, old, or what?"⁸⁸ The relationship of answers to this question and adjustment is given in table 22. The results are in the expected

Table 21. Adjustment According to Extremes of Chronological Age

Personal Adjustment	Age		Total	
	65 to 69	80 and Over	Number	%
Low	59	41	22	100
High	64	36	53	100

$X^2 = .1730 P > .05$

direction: a disproportionately large share of respondents who conceived of themselves as old or elderly is in the low adjustment category, while a disproportionately large share of respondents who conceived of themselves as middle-aged or younger is in the high adjustment category. The findings are near the .05 significance level (X^2 for the .05 level is 3.841), and there is thus considerable basis for rejecting the null hypothesis.

The present analysis also employs an "age-conception" index to provide a measure, not only of the extent to which individuals consider themselves as old, but also a broader measure of this phenomenon as indicated by the extent to which individuals consider themselves beset with the common albeit stereotyped accompaniments of old age;

Table 22. Adjustment According to Self-Conception of Age

Personal Adjustment	Self-conception of age			
	Middle		Total*	
	Aged or Younger	Old or Elderly	Number	%
Low	40	60	50	100
High	57	43	88	100

$X^2 = 3.6080 P > .05$

*The total number of cases here is 138. Six respondents did not give answers to the question which could be categorized.

⁸⁸A total of 18 persons did not specifically indicate that they thought of themselves as middle-aged, elderly, or old, but gave indirect answers. Twelve of these persons denied conceiving of themselves as old by giving responses such as "I'm not old," or "I like to think I'm still young," and those responses were classified with the middle-aged responses.

poor health, reduced income, reduced activity, and a differential treatment because of age. The index was derived by awarding one point each to individuals giving answers which would indicate a "younger" age-conception on the following items:

Item	Response(s) scored one point on age- conception index
1. Do you think your health is better or worse, or about the same as other people of your age?	better, same
2. Would you say your standard of living is better or worse or about the same as most of your friends and acquaintances?	better, same
3. I'd like to know how you think of yourself as far as age goes: Do you think of yourself as middle aged, elderly, old or what?	middle aged or younger
4. Would you say that you are more or less active than most people of your age?	more, same
5. Do you think people treat you differently because of your age?	no

Persons scoring one, two, and three points on the index (no persons scored zero points) are categorized as having an "older" age conception, and persons scoring four and five points are grouped as having "younger" age-conceptions. A comparison of the age-conception categories and adjustment is presented in table 23. The results are significant and in the expected direction: a disproportionately large

Table 23. Adjustment According to Age Conception Index

Per-son- al Ad- justment	Age Conception		Total	
	Older Age Con- ception %	Younger Age Con- ception %	Number	%
Low	45	55	51	100
High	18	82	93	100
$X^2 = 11.8050 \quad P < .05$				

share of persons with "older" age-conceptions is in the low adjustment category, while a disproportionately large share of persons with younger age-conceptions is in the high adjustment category.⁶⁹ Thus table 23 presents a clear basis for rejection of the null hypothesis.

3. **Discussion.** The findings of Jean and Joseph Britton, Phillips, Kutner, and Cavan support the hypothesis that advancing age is related to poor adjustment, but the present investigation tends to support Havighurst and Albrecht's findings that adjustment and chronological age are not related. However, when age is not viewed in terms of chronological years, but rather in terms of how individuals conceive themselves regardless of their years, the research evidence is consistent: self conceptions of being old are related to a poorer adjustment, and the present findings sup-

⁶⁹Categorization does not affect the direction of the findings. When persons scoring only one and two points on the age-conception index are classified as the "older" group, and persons scoring three, four, and five points are put in the "younger" group, the same trends persist.

port the previous research on this point.

If Parsons' characterization of American culture as an essentially "youth" culture is an accurate one, it follows that conceptions of the self as "old" will be related to poor adjustment, and the research findings support this contention. To the extent that "old" age-conceptions result from declining health, re-

duced income, terminated employment, reduced activity, differential treatment because of age, and so on, the measurement of this conception would appear to provide a partial reflection of other more complex variables related to adjustment. The clear implication is that more refined measures of age-conceptions might provide a simple and accurate method of predicting adjustment in older persons.

Summary, Limitations, Conclusions

The growing number and proportion of older persons in our population has brought an interest in the unique adjustment problems of this group.

The present study has attempted to contribute toward an understanding of the relationship of health, marital status, employment, economic circumstances, activities, isolation, and age to the personal adjustment of older persons in the South Dakota rural-nonfarm town of Dell Rapids. Data were gathered by personal interviews with an approximately 70% random-area sample of persons 65 years old and older.

Personal adjustment in the present study is conceived of as success in dealing with changing life problems, and is measured by a six-question Guttman scale of morale. The relationship of the present measure of adjustment to the selected factors, and the extent to which the findings confirm or contradict previous research may be summarized as follows:

1. **Health.** Self-evaluations of health as measured by a health index dichotomized into "good" and "poor" health categories are significantly related to adjustment. Research supporting the proposition that health and adjustment are related is reported by Schmidt, Jean and Joseph Britton, Shanas, Phillips, Cavan, and Kutner.

2. **Marital Status.** Marriage tends to be positively related to adjustment, but the findings do not reach statistical significance. Data supporting the proposition that marriage is related to adjustment is offered by Schmidt, Shanas, Phillips, Kutner, and Cavan.

3. **Employment.** Contrary to the research evidence offered by Jean and Joseph Britton, and Kutner, the present findings show no relationship between employment and adjustment as indicated by a comparison of the adjustment characteristics of employed and retired men. Theorizing that the basic contribution of employment is that of a mean-

ingful role, the proposition that married women will tend to exhibit higher morale than widowed housewives was tested and received some support, though the relationship was not statistically significant.

4. Economic Circumstances. That more favorable economic circumstances tend to be related to adjustment is indicated by significant relationships between adjustment and economic circumstances as measured by sources of income and a standard of living index. The scant and perhaps unreliable income information showed a significant but erratic relationship to adjustment. Economic circumstances as indicated by quantities of conveniences and appliances showed little if any relationship to adjustment. Evidence for the proposition that more favorable economic circumstances are related to adjustment is offered by Joseph Britton, Jean and Joseph Britton, Shanas, Cavan, and Kutner. Havighurst and Albrecht found no such relationship.

5. Activities. Involvement in activities, as measured by a total activities index, a personal activities index, and a social activities index showed no significant relationships to adjustment in the present study. However, the consistency with which high involvement in activities tends to be associated with high adjustment gives slight substantive support to the proposition that activities and adjustment are related. This proposition is supported by the research findings of Schmidt, Burgess, Scott, Albrecht, Joseph Brit-

ton, Jean and Joseph Britton, Shanas, Cavan, and Kutner.

6. Isolation. Social isolation as measured by an isolation index and the frequency of visiting with friends, children, and relatives other than children shows no significant relationship to adjustment. The present findings tend to confirm those of Phillips and Kutner, and contradict the evidence offered by Schmidt and Scott.

7. Age and Age Concepts. The present findings show no relationship between chronological age and adjustment. However, persons conceiving themselves as "old" and "elderly" tend to exhibit poorer adjustment, and the relationship approaches statistical significance. An age-conception index measuring the extent to which individuals consider themselves old, as well as beset with the common problems of the elderly, shows a significant relationship to adjustment. Jean and Joseph Britton, Phillips, Kutner, and Cavan found evidence that advancing chronological age is negatively related to adjustment, although the findings of Havighurst and Albrecht support the present evidence of no relationship. The findings of Shanas, Mason, Phillips, Kutner, and Havighurst and Albrecht support the proposition that self-conceptions of being old are related to adjustment.

Before conclusions can be drawn from the present data, the findings must be placed in their proper perspective, which must include a specific statement on the limitations of the present study. There are at

least four major respects in which the study presents but a limited picture of the relationships of selected factors to personal adjustment in old age. First, the limited number of respondents in the study prevented control of the independent variables. It would be interesting to know, for instance, whether persons with favorable economic circumstances might exhibit relatively low morale if their health is poor, or if good health fails to affect the adjustment of persons who conceive themselves as old. Second, there is the possibility that morale is relatively temporal and changing, and that to be valid, measures must be more representative of longitudinal morale than the present one. Third, measures of health, isolation, economic circumstances, etc., are inferred from the respondent's self-evaluations, which may be affected by subjective distortions. Finally,

the various indexes employed in the study have only logical validity: their validity has not been cross-checked against a known measure or known attributes of a group. They are thought on the basis of their content to measure such things as health, isolation, etc., but the extent to which they are empirically valid measures is not known.

With these limitations in mind we may conclude that the basic hypothesis of the study—that personal adjustment in older persons is related to selected independent variables—receives support from the findings. The evidence that certain of the selected variables are not related to adjustment is, of course, of as great substantive significance as is the evidence that certain factors are related to adjustment. Both contribute to an understanding of the phenomenon of personal adjustment in old age.

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