ABSTRACT

A PILOT STUDY OF AGREEMENT
ON ISSUES AND THEIR PERCEIVED
IMPORTANCE AMONG MARITALLY
ADJUSTED AND MALADJUSTED COUPLES

by Arnold S. Carson

Marital adjustment within the last three decades has been researched by various behavioral sciences. However, it has been only within the last decade that modern statistics and theories of personality have been used in investigating marital adjustment. None of the previous studies on marital adjustment has been replicated.

The purpose of the current study was to explore two methods of developing a marital adjustment scale inferred from two respective theories while deriving content from known spousal agreement correlates of marital adjustment. The first of these theories embodies the concept that marital adjustment is a function of spousal agreement while the personal construct theory assumes that marital adjustment is a function of spousal agreement in interaction with mates' perceived importance of their agreements. A secondary purpose of the current study was to provide a replicated scale of marital adjustment borrowing the measurement procedures which are typical for personality inventories.

An original pool of 140 items for the experimental scale (labeled the "Issues Scale") was constructed. These items were derived from the following seven spousal agreement correlates of marital adjustment: "Handling Finances", "Recreation", "Dealing with In-Laws", "Intimate

Relations", "Friends", "Demonstrations of Affection", "Philosophy of Life". The scale was administered to a pilot group of fifteen couples to gain their reaction to the wording and ordering of items in the scale. The scale was then administered to the main sample, 47 maritally adjusted and 48 maritally maladjusted couples. The maritally adjusted couples were operationally defined as those scoring above 100 on the Locke-Wallace Short Marital Adjustment Test.[1] The maritally maladjusted couples were either starting procedures for divorce or receiving professional services for diagnosed marital problems. The subjects were randomly divided into a validation and cross validation group.

Each item of the original pool was individually validated and cross validated in accordance with its ability to differentiate significantly between maritally adjusted and maladjusted couples of the cross validation group.

Responses were scored by two alternate methods according to the two respective theories described earlier. It was found that the scale scored according to the theory embodying only spousal agreement produced 48 validated and 20 cross validated items. The scale scored according to the theory embodying spousal agreement in interaction with mates' perceived importance of the issues produced 38 validated and 13 cross validated items. The 48 validated items scored for spousal agreement differentiated significantly between the maritally adjusted and maladjusted subjects of the cross validated sample at a $p < .0005$ while the 38 validated items scored for spousal agreement in interaction with spousal perceptions of issues differentiated significantly between the respective groups at a $p < .005$.

The reliability of the scale was estimated for each of the groups in

the validation and cross validation samples by Hoyt's[2] Analysis of Variance Method. Although the straight spousal agreement scoring was more productive of items, the configural scoring was more reliable (straight agreement scoring: r = .47 to .77; configural scoring: r = .60 to .90).

It was concluded that the traditional interpretation of compatability in marriage as a function of spousal agreement in certain well defined areas is a misleading framework fostering only partial scaling of marital adjustment. The traditional framework warrants alterations. Compatability in marriage is a function of spousal agreement in certain well defined areas and on the perceived importance of these areas.

The areas of spousal agreement which have been correlated with marital adjustment in previous studies included "Handling Finances", "In-Laws", "Recreation", "Intimate Relations", "Demonostrations of Affection", "Friends", and "Philosophy of Life". In the current study where spousal agreement on perceived importance of issues was considered, 69.2 per cent of the items were drawn from the areas "Dealing with In-Laws", "Handling Finances" and "Friends", and no items were drawn from the area "Philosophy of Life".

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[1] H. J. Locke and K. M. Wallace, "Short Marital Adjustment and Prediction Tests: Their Reliability and Validity," Marriage and Family Living, XXI (1959), pp. 251-5.

[2] C. J. Hoyt, "Test Reliability Estimated by the Analysis of Variance Method," Psychometrika, VI (1941), pp. 267-87.

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CHAPTER I

THE PROBLEM

Marriage, one of the oldest and most traditional institutions, has become an object of study by the newest of the sciences. The conduct of modern marriage, though given token definition by its traditional counterparts, is no longer specifically prescribed by these same counterparts but instead by the personalities and personal relationships of the mates. Burgess and Cottrell give credence to the changed regulators of marital conduct and point to their implications for adjustment in marriage

> Marital adjustment must, then, be defined in the modern conception of marriage. Adjustment is not insured here, as it is in the orient, by customs and ceremonies minutely regulating the conduct of the young married couple. If marriage has become a personal rather than social relation, adjustment is to be defined in terms of personalities, and the degree of assimilation taking place. [1]

It is not unlikely that if the conduct of marriage is a function of the personalities and personal relationships of the mates that the success or failure of modern marriage may be diagnosed and prognosticated by the study of the same variables. During the period between 1929 and 1939 psychologists, sociologists, and psychiatrists spent a goodly portion of their research energy describing and forcasting adjustment in marriage. Since this period, the same disciplines have devoted their energies to refining their methodologies to give credence to the

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[1] E. W. Burgess and L. S. Cottrell, Jr., Predicting Success or Failure in Marriage (New York: Prentice Hall, 1939), p. 10.

complexity of the variables which make an adjusted or an unadjusted marriage. Theory building and the application of already existing theory is a recent development of note in the study of marital adjustment.

The current study represented the development of a marital adjustment scale in which both the items and scoring of the scale were inferred from theories.

The Success or Failure of Marriage

The large increases in divorce rates over and above the increase of population in the United States has drawn attention to maladjustment of marriages as a serious social problem. While the population increased only 215.7 per cent from 1870 to 1930, the number of divorces increased 1,647.8 per cent. The divorce rate rose from 28 per 100,000 people in 1870 to an estimated 193 per 100,000 people in 1937.[2] In 1932 there was one divorce for every six marriages. Current estimates indicate that the ratio of divorces to marriages has increased further.

The lack of divorce does not necessarily imply an adjusted marriage while divorce almost unanimously implies maladjustment in marriage. It is conceivable that divorce is used as a means to other ends. However, the remaining aura of sanctity surrounding the institution of marriage plus the necessity of legal evidence proving a marriage intolerable has confined the use of divorce for release from an undesirable marriage. Divorce has served as a decisive and clear cut criteria of marital maladjustment in previous investigations.

The criterion of adjustment in marriage is more sought and less

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[2] S. A. Stouffer and L. M. Spencer, "Recent Increases in Marriage and Divorce," American Journal of Sociology, XL (January 1939), p. 552.

found than the criterion for maladjustment in marriage. It is clear, though, that a criterion of adjustment in marriage must manifest a strong negative correlation with divorce. Burgess and Cottrell[3] explored the possibility of having 526 couples rate the happiness of their marriage on a five-point scale. They found that 1) most people can estimate the happiness of their marriage on a five-point scale regardless of the ambiguity of the terms "happiness", 2) husbands and wives usually agree in their estimates of marital happiness, 3) an outsider who is fairly well acquainted with the marriage will generally agree with a member of a couple on his happiness rating, and 4) two outsiders reasonably familiar with a given marriage will usually agree in their appraisals of the marriage. Moreover, people's estimates of their marital happiness do not fluctuate markedly over short periods of time, but reliable and stable happiness ratings are only crude indices of marital adjustment.

Burgess and Cottrell interpret their results, "It must be admitted, however, that the evidence does not enable us to say how much of apparent agreement in the estimation of happiness in marriage is due to a generalized unconscious tendency to rate marriages as they are supposed to be rather than they are." [4]

Terman studied eight-hundred married couples and found a seven point happiness rating to be skewed for his sample in the direction of greater happiness than would be expected were his sample normally

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[3] Burgess and Cottrell, op. cit., pp. 30-46.

[4] Ibid., p. 44.

distributed. The author attributes the skewness to the inequality of scale units, selective influences and the omnipresent "generosity" tendency in personality ratings.[5]

Due to the difficulties of obtaining a large sample of divorced couples who would be willing to participate in a study on marriage, both of the above studies had to rely upon the happiness ratings of relatively adjusted couples as a criterion for further correlates of marital adjustment. Burgess and Cottrell included 18 divorced couples in their sample, and Terman included 50 and 75 couples known to be maladjusted. The extent of divorced couples in both studies were not proportionate to the ratio of those divorced during the period from 1929 to 1939. However, both Terman's and Burgess and Cottrell's studies are classical presentations of what variables comprise an adjusted marriage. They did not purport to determine any cause and effect relationships. The determination of cause and effect in the adjustment or maladjustment of marriage was a task left to a future generation of researchers, refinement in technology, and the development of applicable theories of human behavior.

The Personal Construct Theory of Human Behavior

A number of current personality theoreticians have constructed theories of human behavior embracing three aspects: perception, behavior, consequences. Stated in simplest terms these theories posit that the behavioral and affective consequences in human behavior are

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[5] L. M. Terman, Psychological Factors in Marital Happiness (New York: McGraw Hill, 1938), pp. 48-83.

a function of a person's perceptions.[6] In the following section a review is presented of the aspects of Kelly's Theory of Personal Constructs[7] and their implications for scale development in marital adjustment.

The Psychology of Personal Constructs

Kelly formulated his theory in terms of the following fundamental postulate and eleven corrollaries:

A. A person's processes are psychologically channeled by the ways in which he anticipates events.
   1. A person anticipates events by constructing their replication.
   2. Persons differ from each other in their construction of events.
   3. Each person characteristically evolves, for his convenience in anticipating events, a construction system embracing ordinal relationships between constructs.
   4. A person's construction system is composed of a finite number of dichotomous constructs.
   5. A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system.
   6. A construct is convenient for the anticipation of a finite range of events only.
   7. A person's construction system varies as he successfully construes the replication of events.
   8. The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie.
   9. A person may successively employ a variety of construction systems which are inferentially incompatible with each other.
   10. To the extent that one person employs a construction of experience which is similar to that employed by another, his psychological processes are similar to those of the other person.

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[6] Calvin Hall and Gardner Lindzey, Theories of Personality (United States: Wiley, 1957), chaps. 8 and 12.

[7] George Kelly, The Psychology of Personal Constructs (New York: Norton, 1955), pp. 46-104.

11. To the extent that one person construes the construction processes of another, he may play a role in a social process involving the other person.[8]

Kelly's basic postulation and first three corollaries suggest that human behavior is a function of the manner in which individuals perceive events and anticipate the consequences of behavior. His formulations applied to marriage imply that the relative adjustment of a marriage is a function of the mates' perceptions of events in their marriage and anticipated consequences of these events. Corollaries numbered 10 and 11 are the foundations for inferring that similarity of perceptions are based on similar psychological processes.

The personal construct theory has not been considered in scales of marital adjustment which are scored only for responses to the content. However, the implications of Kelly's theory may be studied by affording the subject with the opportunity to make a choice regarding his perception of the item to which he is responding. Accordingly, items which subjects perceive as being important to them should have more discriminatory power than items which are perceived as unimportant. In the context of marriage it can be inferred that items which mates perceive as important have greater implications for the consequences, marital adjustment or marital maladjustment, than items which the mates perceive as unimportant.

The Similarity Theory of Marital Adjustment

In both common folklore and clinical practice it has been assumed that the similarity of mates is associated positively with adjustment

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[8] Kelly, op. cit., pp. 46-104.

in marriage. In 1938 and 1939 Terman[9] and then Burgess and Cottrell[10] studied similar and disimilar mates and their respective marriages. In both studies similarity of mates was operationally defined as the agreement of mates on certain well defined issues thought to be relevant to marital adjustment. In each of the studies agreement of mates in areas such as demonstrations of affection, friends, and dealing with in-laws correlated with marital adjustment ranging from an r = .33 to .70.

Scales of marital adjustment for the last two decades have in part been based upon the correlations established by Terman and by Burgess and Cottrell. Continued experience with such scales has suggested that the relationship between agreement of mates and marital adjustment is a fruitful basis for the further study of adjustment in marriage.

The Purpose of the Study

The purpose of the present study is to construct a scale of marital adjustment from a conceptual framework of the agreement of the mates subsumed under Kelly's personal construct theory of behavior. The items of the scale will be developed through the systematic exploration of seven spousal agreement areas which in past studies were significantly correlated with marital adjustment. The scoring system of the scale will be configural in order to incorporate the inferences from the similarity theory of marital adjustment. The items also will be scored only for straight agreement of the mates on issues in order

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[9] Terman, op. cit., pp. 48-83.

[10] Burgess and Cottrell, op. cit., pp. 30-46.

to determine whether or not the configural scoring system increases the reliability and validity of the scale.

Previous scales of marital adjustment or marital happiness have incorporated the notion that similarity of the mates or agreement of mates is related to marital adjustment. However, the construction of marital adjustment scales has been a pragmatic venture. The variables subsumed under the concept of similarity of mates have not been derived from an integrative theory of behavior; thus, any interpretation of cause and effect relationships could not be logically inferred from the responses of the couples. Instead scale constructors have had to confine their interpretation of findings to statements of concomitance, i.e. low marital adjustment is related to variables X, Y, Z.

Another characteristic of existing scales of marital adjustment is that there has been no systematic exploration of any one of the variables known to be concomitant with marital adjustment. The typical approach in constructing such a scale is to weight gross items in accordance with their extent of correlation with marital adjustment as rated by friends, relatives or experts and then give scoring deference to the higher weighted items.

A third characteristic of existing marital adjustment scales is that they are not constructed to allow for individual interpretation of protocols. In order to afford interpretive material on the individual tested, a scale would have to measure in some way the individual's perception of the items to which he responds.

Recent advances in research on marriages suggest that marital

adjustment may be successfully scaled by configural scoring techniques[11] and that the concept of similarity of mates as it is related to marital adjustment is subsumable under a personal construct theory of human behavior.[12]

General Hypotheses

Two general hypotheses are stated referring to the two alternate scoring systems used in the study. The first hypothesis is constructed to consider the effects of mates' perceived importance of issues as well as their consensus on the truth or falsity of issues. The second hypothesis refers only to mates' consensus on issues correlated with marital adjustment. A third hypothesis is stated referring to the content of the scale.

1. Maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues correlated with marital adjustment which they perceive as important.
2. Maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues correlated with marital adjustment regardless of the perceived importance of the issues.
3. Items derived from spousal agreement areas known to be correlated with marital adjustment will discriminate

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[11] R. J. Swan, "The Application of A Couple Analysis to the MMPI in Marriage Counseling" (Unpublished Ph.D. dissertation, University of Minnesota, 1953).

[12] R. J. Corsini, "Understanding Similarity in Marriage," Journal of Abnormal and Social Psychology, LII (1956), pp. 327-32.

between maritally adjusted and maladjusted couples.

A more comprehensive report of the research pertinent to the current study will be presented in Chapter II. In Chapter III the design of the study will be discussed with reference to the null hypotheses, alternative hypotheses and the statistical analysis. The selection of the subjects, administrative procedures and the instruments involved in the collection of the data for the study will be found in Chapter IV. The accumulated data will be presented and analyzed in Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

Marital adjustment is usually studied from a sociological or psychological frame of reference. In order to develop a clear cut theoretical foundation for a study of marital adjustment, the relationship of sociological and psychological data to one another needs to be organized in accordance with the logic of science. The first part of Chapter II contains a discussion of the principles for relating sociological to psychological data.

In the second part of the chapter the sociological data on marital adjustment as background factors are reviewed. Although they are kept in mind as possible sources of extraneous variance, no attempt is made to critique the literature in this area.

In the last section of the chapter attempts to scale marital adjustment are reviewed and critiqued. Unlike the research on background factors, the adequacy of previous scale construction must be determined in order to weight the theoretical importance of past scales for the development of the experiment scale.

Background Factors in Marital Adjustment

The Importance of Background Factors in Marital Adjustment

What is considered a background factor in marital adjustment is largely a question of discipline. The psychologist may consider economic status and dwelling units as background factors while the sociologist may focus upon the above variables placing other variables such as impulsitivity and ego strength in the background. The integrity

of results from psychological analysis and sociological analysis need not contradict each other since they each afford explanations at their appropriate levels.

A hypothetical situation may be invented to examine the above issue, which is one of reductionism, more thoroughly. A sociologist contends from empirical investigations that a lack of cultural opportunities is the main cause of divorce. A psychologist studies the same sample and contends that hostility of the mates is the main cause of divorce. The two investigators are not contradicting each other but merely studying the same phenomenon from different frames of reference. Brodbeck[1] suggests that the relationship between the two types of explanation is not one of antagonism but one of derivation:

> The patterns of observable individual behavior are the referants of the group concepts. The latter are therefore definable in terms of behavior of individuals, including, of course, their relations to each other. These definitions alone, however, do not permit the explanation of group behavior by means of the behavior of individuals. Or, to say the same thing differently, definition alone is not sufficient for the reduction of sociology to psychology.[2]

Brodbeck contends that psychological concepts are not interchangeable with sociological concepts.

> The basic terms referring to complexes and those referring to members are not interchangeable. The composition laws of psychology are about how the "elements" or members interact with each other. The sociological laws are about the resultant behavior of groups. These two kinds of laws need not and in general will not have the same form.[3]

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[1] May Brodbeck, "Models, Meanings, and Theories," Symposium on Sociological Theory (Evanston, Illinois: Row, Peterson, 1959), pp. 373-403.

[2] Ibid., p. 397.

[3] Ibid.

Brodbeck's analysis of the relationship between psycholgical and sociological results implies that a phenomena may be explained on different planes and that the partialing out of the variance at one plane would entail the loosing of variance at the other plane. That is to say, if lack of education on the sociological level and feelings of inadequacy on the psychological level are causes of marital discord when the sociological and psychological variables are correlated, the sociological variable cannot be controlled without reducing the effects of the psychological variable and visa versa. The extent of education must be left free to vary in order not to constrict the psychological variable. On the other hand, the intrusion of unpredicted psychological variables in a psychological study are unwelcomed and must be anticipated and controlled.

The background factors which will be discussed on the following pages are those factors which are related to marital adjustment on a different plane from that which is being studied in the present thesis. In accordance with the perspective suggested by Brodbeck, they will be described and analyzed as concomitants to the proposed causes rather than variables which might contradict the integrity of the predicted causes of marital adjustment or maladjustment.

By disregarding the evidence secured from a different frame of reference as confirmatory or disconfirmatory, the researcher accepts the following ethical obligations:

1. To illustrate the pervasiveness of the predicted variables among groups described by different background factors.
2. To interpret empirical disconfirmation as a result of faulty prediction, faulty instrumentation or faulty

theory rather than interference from uncontrolled background factors which are not controlled because they are purported to be concomitant with the predicted results.

Economic Factors

Common sense suggests that when the breadwinner does not bring home the bread, marital problems might ensue. In 1938 Terman[4] stated that although low income is no doubt a factor is domestic discord, the incidence of marital difficulties associated with this factor is offset by the incidence of marital difficulties among couples having surplus money. Since more than four-fifths of Terman's couples were high school graduates and more than a third were college graduates, it is understandable that the economic factor did not prove to be diagnostic of maladjustment among his sample. Level of income is more strongly associated with marital adjustment in Burgess and Cottrell's study[5] but only in interaction with educational status, occupational status and mobility. Burgess and Cottrell's sample is also skewed in the direction of the middle and upper socioeconomic classes. Judging from the above early studies, a foregone conclusion may be expressed: economic factors are related to marriage among those couples where income is scarce.

Goode[6] studied the financial status of recently divorced couples in Detroit, Michigan. His data affirmed a rough inverse relationship between economic factors and divorce. His statistics, which are

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[4] L. M. Terman, Psychological Factors in Marital Happiness (New York: McGraw Hill, 1938), p. 170.

[5] E. W. Burgess and L. S. Cottrell, Jr. Predicting Success or Failure in Marriage (New York: Prentice Hall, 1939), p. 157.

[6] W. J. Goode, "Economic Factors and Marital Stability," American Sociological Review, XVI (1951), pp. 298-301.

descriptive but not inferential, suggested that the effect of economic factors in divorce interact with other factors which would suggest that their association with divorce might be expected to be lower in a direct cause-effect relationship.

Williamson[7] hypothesized that the following three economic factors are positively associated with marital adjustment.

1. Social Status as indicated by location, type of residence, level of education and occupation.
2. Economic Security as indicated by indices of savings, regularity of employment and freedom from debts.
3. Effective Economic Management as indicated by budgeting and efficient management of the home.

The author randomly selected 210 couples from the white population of Los Angeles, California, interviewed them separately, and gave them a marital adjustment scale adapted from scales developed by Burgess and Cottrell and by Locke. Those couples earning mediocre scores on the marital adjustment scale were eliminated from the analysis of the data. The results were based on 85 men and 86 women scoring high and 66 men and 62 women scoring low on the scale.

Husbands having occupations in the skilled labor, business or professional classes at the time of marriage were significantly happier than husbands in an elemental or an unskilled class of work at the time of marriage. The pattern was similar for the wives' former occupations. A significantly larger percentage of the happy couples were employed as white collar or managerial workers. Couples earning less than $436

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[7] R. C. Williamson, "Economic Factors in Marital Adjustment," Marriage and Family Living, XIV (1952), pp. 298-301.

per month prevailed among the unhappy couples although these couples did not significantly qualify as unhappy.

The associations between residential area and marital happiness were differential. Males and females living in "Low" residential areas were significantly unhappy in marriage. Males and females living in "High" residential areas were significantly happy. However, males living in "Middle" residential areas were happy while females living in this same area were unhappy in marriage. Although the percentage was not significant, there was a tendency for couples who rented their homes to be unhappy in their marriages.

A combined economic security rating discriminated significantly between happy and unhappy couples. The sub-categories of the security rating afforded data which had not been collected in the United States before Williamson's study. Couples with at least $600 savings were significantly happier than couples with less than $600 savings. Husbands owing less than $300 were significantly happier than husbands owing more than $300. Although insurance per se was not as predictive as other assets, wives protected by $5,000 were more often happy than those protected by less. Unemployment was significantly related to marital happiness in a negative direction.

Williamson's study was a thorough investigation of the economic factors in marriage. However, some caution in the interpretation of his results is warranted. The author did not state the level of statistical significance which he used to reject the (unstated) null hypotheses, nor did he state statistical and sampling procedures used. Assuming that the above factors could be accounted for, it may be interpreted from Williamson's results that the economic factor associ-

ated with marital adjustment is in fact a multitude of factors each worthy of a detailed investigation.

The Impress of Cultural Background

The impress of cultural background refers to all the cultural or social influences upon a person. Burgess and Cottrell[8] first applied the above terminology in order to classify a segment of their results. They found that likeness of cultural impress between the mates was associated with marital happiness and marked differences in cultural impress with unhappiness in marriage. It was also discovered that the overall cultural level of the husbands' parents was more important than the overall cultural level of the wives' parents for success in marriage. Certain differences between the husband and wife popularly assumed to be inimical to a successful marriage, such as differences in religious affiliations and educational status, showed no relation to marital adjustment during the first six years of marriage. Residence in the country during childhood and adolescence was favorable, but residence in the city during the same periods was unfavorable to marital adjustment.

The indices of cultural impress were many. Maturity, educational opportunities and achievements, participation in religious activities, number of friends, membership in organizations, and residence in neighborhoods of single dwelling units all play some part in providing an atmosphere conducive to adjustment in marriage. Burgess and Cottrell concluded,

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[8] Burgess and Cottrell, Jr., op. cit., p. 157.

> This socialized person is perhaps characterized by traits of stability, conventionality and conformity. He has been molded by and has participated in our social institutions. He is, therefore, well fitted by training and experience to make the adjustments required in marriage.[9]

Granting the association between cultural impress and marital adjustment, the question may be raised if levels of cultural impress are predictive of marital adjustment. Terman[10] pointed out that occupational level was not predictive of marital adjustment, although this finding was contra-indicated in later studies. No significant relationships were found between occupational classification and marital adjustment for 1,584 subjects. His findings did indicate that similar mental abilities of mates were related to marital happiness. When the husband's mental ability was significantly inferior, the wife was unhappy. When the wife's mental ability was significantly inferior, the husband was unhappy.

Locke's 1951 study[11] of a representative sample of divorced and happily married couples afforded further cultural impress factors significantly associated with marital adjustment:

1. The wife not being a service worker at the time of marriage.
2. Working in professional or semiprofessional occupations during marriage as well as sales or clerical occupations for the women.
3. The wife not being engaged in domestic work during marriage.
4. Good houses as measured by higher than average rents,

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[9] Ibid., p. 134. [10] Terman, op. cit., p. 168.

[11] H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951), pp. 22-3, 297.

higher than average values if house is owned, having modern plumbing, and having a furnace.

5. Wide interests as measured by taking a newspaper.
6. Sociability as measured by having a telephone.
7. Interests in homemaking, as measured by ownership of such things as a home, an electric refrigerator, electric washer and a radio.
8. Regularity of employment of the husband.
9. Wife efficient in managing the home.
10. The husband's approval of the wife's working.

The importance of Locke's findings on cultural impress was that his study boasted of a representative sample. Due to the great fluctuation of cultural impress factors among various socioeconomic groups, previous normative studies are only of value in relation to their narrower normative samples.

A current study was made of the divorce rate by occupations in the State of Iowa; a state whose distribution of occupations resembles that of the national distribution. The figures which were based upon the 1950 census of occupations and the author's own compilation of the 1953 divorces are reported in Table 2.1. As in the case of Goode's study[12] on economic status, Monaham's study[13] also reported a rough inverse relationship between occupational status and distribution of divorces.

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[12] Goode, "Economic Factors and Marital Stability," op. cit., pp. 298-301.

[13] T. P. Monaham, "Divorce by Occupational Level," Marriage and Family Living, XVII (1955), pp. 323-31.

Table 2.1. Occupations Distribution of Divorces and Employed Males in Iowa (Excluding Farm Occupations) [14]

Occupations	Divorce: 1953*	Employed Males: 1950*
Professional	4.3	8.3
Owner-Officials	5.3	15.1
Clerks	3.9	7.1
Salesmen	7.8	9.3
Craftsmen	21.2	22.7
Operatives	21.3	21.3
Service Workers	4.4	6.3
Laborers	31.8	9.9
Total	100.0	100.0

* In terms of per cent.

[14] Ibid., p. 329.

Age and Duration Factors

Age and duration factors in marriage are like prisms revolving in the sun's light. Each surface gives a different glimpse of the same totality. Unfortunately, duration and age studies in marriage have rarely been deduced from theory so that they have been performed as acts of caprice rather than answers to explicite a priori questions. Age difference of couples, age at marriage, length of marriage, length of engagement and number of years married before the first child illustrated some of the many sub factors which have been studied.

Age Factors Terman[15] reported that the subjective satisfactions in marriage were, in the aggregate, almost equally distributed for his sample. Length of marriage correlated with marital happiness -.028 for the husbands and -.048 for the wives. These correlations are computed for his sample representing a population with a range of marriage lengths of less than one year to twenty-seven years. The mean number of years of marriage for the group was 11.4 and the standard deviation 7.4. Age at marriage correlated with the husbands' own marital happiness score .051 and -.030 with the wives' happiness score. For the women age correlated .054 with their own happiness and their husbands' happiness score. None of the correlations were significant which suggested that the age happiness factors correlated have a random relationship.

Burgess and Cottrell[16] asked two questions about age factors in

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15 L. M. Terman, Psychological Factors in Marital Happiness (New York: McGraw Hill, 1938), pp. 175, 180, 188.

16 E. W. Burgess and L. S. Cottrell, Jr., Predicting Success or Failure in Marriage (New York: Prentice Hall, 1939), pp. 115-8.

marriage: Is there an optimum age for marriage and do early marriages turn out better or worse than the average? They found no clear cut answer to the first question although there was a tendency for men who marry in the age group of 28 to 30 to be happier than other age groups. The second question also could not be answered by the data. However, there were significant findings. Men who marry after the age 31 earned a significant number of "poor" adjustment scores while a marked number of "good" adjustment scores were earned by women who marry after they are 28 years old. However, small samples at these age levels and a lack of cross-validation suggested cautious acceptance of the latter findings.

Locke[17] listed four age factors which are significantly correlated with marital adjustment:

1. A period of acquaintance for women of over a year and preferably of over two years.
2. An engagement of six months or over for men and for a year or over for women.
3. Marriage between the ages of 21 to 29 for women and between 24 to 29 for men.
4. Approximate equality of the ages of husband and wife.

The contradiction between Locke's third finding and Burgess and Cottrell's trends for optimal age of marriages may be due to a time interval of 12 years, differences in samples, differences in instrumentation, or a combination of these variables. Locke's findings probably were closer

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[17] H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951), p. 105.

approximations of optimal ages for marriage because of their recency and broader base for generalization which he achieved by having a near representative sample.

Duration Factors A thorough survey of the duration of marriages was conducted in 1954 for 1,434 subjects in Philadelphia County.[18] Table 2.2 reports from the survey that both the percentage of divorces and separations slowly decrease after the third year of marriage, suggesting that family instability is the greatest during the first three years of marriage.

Table 2.3 taken from the same study illustrates the lesser stability of Negro marriages when compared with white marriages. The author of the survey being described warned that his figures are oversimplified sociological data since the rate of divorce and separation must be scrutinized in relation to yearly fluctuations, death rates, actual as opposed to legal termination date, remarriage factors and divorce reporting system for Negro and foreign groups.

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[18] W. M. Kephart, "The Duration of Marriage," American Sociological Review, XIX (June 1954), pp. 287-94.

Table 2.2. Duration of Marriage by Separation Dates and Divorce Dates: Philadelphia County Sample, 1937-1950 (N = 1.434)

Duration by Years	Separation*		Divorce	
	Per Cent of Cases	Cumulative Per Cent	Per Cent of Cases	Cumulative Per Cent
-1	14.6	14.6	0.9	0.9
1	11.3	25.9	4.1	5.0
2	8.6	34.5	6.1	11.1
3	8.3	42.8	5.5	16.6
4	6.9	49.7	6.1	22.7
5	6.2	55.9	5.8	28.5
6	6.0	61.9	5.1	33.6
7	4.9	66.8	5.5	39.1
8	3.8	70.6	5.7	44.8
9	3.9	74.5	6.5	51.3
10	2.7	77.2	3.4	54.7
11	2.8	80.0	4.3	59.0
12	2.4	82.4	3.1	62.1
13	1.6	84.0	2.9	65.0
14	2.5	86.5	3.1	68.1
15-19	7.9	94.4	13.4	81.5
20-24	3.4	97.8	8.9	90.4
25-29	1.2	99.0	6.3	96.7
30 and Up	1.0	100.0	3.3	100.0
Medians:	5.1 years		9.7 years	

* Excluding 13 cases in which separation date was not reported.

Table 2.3. Duration of First Marriages in Desertion and Non-Support Cases, Philadelphia County, 1950

Duration by Years	White (N = 1,024) Per Cent of Cases	White (N = 1,024) Cumulative Per Cent	Negro (N = 779) Per Cent of Cases	Negro (N = 779) Cumulative Per Cent
-1	7.9	7.9	10.5	10.9
1	9.6	17.5	9.6	20.1
2	10.1	27.6	12.4	32.5
3	9.3	36.9	11.4	43.9
4	6.6	43.5	9.0	52.9
5	5.4	48.9	5.4	58.3
6	3.9	52.8	4.9	63.2
7	4.1	56.9	5.8	69.0
8	5.0	61.9	5.1	74.1
9	5.0	66.9	3.6	77.7
10	3.7	70.6	2.6	80.3
11	2.7	73.3	2.1	82.4
12	3.5	76.8	2.6	85.0
13	2.8	79.6	3.7	88.7
14	1.9	81.5	1.3	90.0
15-19	7.0	88.5	6.3	96.3
20 and Up	11.5	100.0	3.7	100.0
Medians:	6.3 years		4.7 years	

Methods of Scaling Marital Adjustment

The first report of a study which attempted to scale marital adjustment was published in 1929.[19] The question was asked to 1,000 married women, "Is your married life a happy one? If not, why?" Eighty-seven per cent of the women answered that they were happy, and the remaining 13 per cent stated that they were unhappy for various reasons. No statistical data was presented on the reasons for unhappiness. The subjects of the sample resided throughout the United States, and the data was collected in 1920 and 1921.

Since the appearance of the above study, twenty-nine separate studies of marital adjustment have been published. An appendix compiled by Locke[20] listed sixteen of these studies in the chronological order of sample collection. The area of the study, size of sample and criteria of marital adjustment were also included in Locke's compilation. The present investigator used Locke's appendix as a guide to the sequence in which differing scaling techniques have developed in studies of marital adjustment. Recent attempts to scale marital adjustment are also reviewed and critiqued in accordance with their chronological sequence of publication. Lastly, a summary chart of recent attempts to scale marital adjustment is listed in the summary of this section of Chapter II.

In order to maintain historical sequence, research which did not

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[19] Katherine Davis, Factors in the Sex Life of Twenty-two Hundred Women, cited by H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951), p. 388.

[20] H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951), pp. 388-92.

scale marital adjustment will be superficially reviewed while research attempting to scale success in marriage will be examined in detail.

Four studies were attempted prior to the publication of the 1938 and 1939 large scale normative studies by Burgess and Cottrell and by Terman. All of these studies were exploratory, and they did not have the benefit of normative data on what factors are necessary for and which factors are distracting from adjustment in marriage.

In 1924 Hart and Shields[21] studied marital happiness in relation to age at marriage for 500 cases from the Court of Domestic Relations in Philadelphia. A major flaw in this early study is apparent, i.e., there is no reason to believe that the sample of marriage license applicants will arrive at adjusted marriages. Hamilton[22] studied 100 men and 100 women including 55 couples with the help of a thirteen item marriage satisfaction questionnaire. His data was collected between 1926-1949 in New York City. Hamilton was interested in establishing the relationship between sexual satisfaction and marital satisfaction. He established the relationship by a preponderance of evidence rather than by statistical techniques. Bernard[23] studied the traits and distribution of traits in a successful marriage. She tested 115 married men and 137 married women from St. Louis, Los Angeles, and Seattle with a 100 item true-false test.

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[21] H. Hart and W. Shields, "Happiness in Relation to Age at Marriage," Journal of Social Hygiene, XII (1926), pp. 403-7.

[22] G. V. Hamilton, A Research in Marriage (New York: Boni, 1929).

[23] Jessie Bernard, "The Distribution of Success in Marriage," American Journal of Sociology, XXXIX (1933), pp. 194-203; and "Factors in the Distribution of Success in Marriage," American Journal of Sociology, XL (1934), pp. 49-60.

In a series of studies Kirkpatrick[24] surveyed poorly adjusted and well adjusted couples from Minnesota and vicinity. His criteria of well adjusted and poorly adjusted was ratings by friends and relatives. One of his studies surveyed 104 well adjusted couples and 70 poorly adjusted couples; the other study surveyed 210 couples and 74 individuals. Of the couples 58 were well adjusted and the remainder were poorly adjusted. Kirkpatrick found that mates enjoying activities together, a wife's not being more intimate with one parent over another, a husband not having an excess of women friends before marriage, and a husband not being patriarchal in the home were positively associated with marital adjustment.

The turning point in marital research came with the publication of Terman's and Burgess and Cottrell's normative studies. Prior to these publications sporadic unrelated studies were the rule. The two normative studies provided a solid foundation which has been built upon or reconstituted in recent years.

Psychological Factors in Marital Happiness

Terman's[25] general hypothesis was that successful adjustment in marriage is in part a function of personality variables. He chose the Bernreuter Personality Inventory and the Strong Interest Test to

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[24] Clifford Kirkpatrick, "Factors in Marital Adjustment," American Journal of Sociology, XLIII (1937), pp. 270-83; "A Methodological Analysis of Adjustment," American Sociological Review, IV (1939), pp. 325-34; and "Community of Interest and the Measurement of Marital Adjustment," The Family, XVIII (1938), pp. 133-7.

[25] L. M. Terman, Psychological Factors in Marital Happiness (New York: McGraw Hill, 1938), pp. 48-83.

measure personality traits. These two instruments were filled out anonymously by 341 married couples and 109 divorced couples making a total of 900 subjects. The population represented by the above sample consisted entirely of residents of California, chiefly in the area within 50 miles of San Francisco. A majority of the subjects were of the middle and upper-middle level in respect to socioeconomic status. More than four-fifths had completed high school and more than a third were college graduates.

The criterion of marital adjustment was based upon a sampling of 1,584 subjects. It was a composite of two kinds of data supplied anonymously and independently by the two spouses: (1) subjective ratings of the happiness of the marriage and (2) factual information on husband-wife agreement or disagreement about various matters, on methods used in resolving disagreements, on specific things in marriage that are unsatisfactory, on regrets over mate, and on consideration that may have been given to separation or divorce. The prediction scale which was developed by Terman was based on the actual correlates of the analysis of the two types of data collected.

Terman found that happy couples are not markedly distinguished from unhappy or divorced couples by either greater or lesser resemblance in personality traits measured by the personality test. For both mates to score low or both to score high on a personality trait is neither much more nor much less favorable than for one to score one way and the other to score the opposite way. Terman concludes, "In view of all the evidence which we have just reviewed, one can only say that the search for personality trait variables associated with marital

compatibility has not been very successful (page 26)."

It appears that Terman's failure to psychometrically identify personality traits associated with marital adjustment may be attributed to a number of inadequacies of the study rather than to the non-existence of such variables. The Bernreuter Personality Inventory was used even though there was no reason to believe that the inventory was a valid measure of the traits it purported to measure. A false expediency of the study was the use of the Strong Interest Test as a measure of personality traits to be associated with marriage without any theoretical foundation or clinical rationale for the same. All that can be concluded from the use of this instrument in isolation of theory is that the traits which it measures are not significantly associated with marital adjustment.

The second criticism of the study pertains to the manner in which the personality tests were used. From some unstated rationale, the assumption was made that the mates' sameness of scores on either of the measuring instruments was associated with marital adjustment. It would not have been thoroughly illogical to assume that opposing scores of mates were positively associated with marital adjustment.

A third criticism of the study pertains to the nature of the sample. Regardless of the findings, they are only applicable to the middle and upper-middle socioeconomic groups. No rationale had been established for the pervasiveness of the personality traits measured. Therefore, it could not have been concluded that the empirically defined personality traits would not have correlated significantly with marital adjustment among socioeconomic groups which were not studied. Another question which must be considered in relation to the sample is whether it was

truly representative of the population it purported to represent. There was little evidence given which suggested that the 1,584 subjects were a random sample of married and divorced couples among the middle and upper-middle socioeconomic strata.

The major attributes of the study are that it has given impetus to much research and that it identified the universe of correlates of marital adjustment. One of these correlates, the husband-wife agreement or disagreement about various matters has particular relevance for the present thesis. Terman's couples were asked to rate independently and anonymously their agreement on eleven areas on a seven point scale from always agree to never agree. These ratings were correlated with the ratings of marital happiness made by the same couples in order to yield an index of the relationship between the eleven areas and marital happiness. A list of the eleven significant items which Terman had his couples rate follows:

1. Do you and your wife engage in outside activities together?
2. On handling family finances
3. On matters of recreation
4. Religious matters
5. Demonstration of affection
6. Friends
7. Caring for children
8. Table manners
9. Matters of conventionality
10. Philosophy of life
11. Dealing with in-laws.

Husband-wife agreement on items 5, 10, 1, 7, 3 and 2 manifested the strongest relationship with marital adjustment in that order. Correlations for these items with marital happiness ranged from .41 to .60. Terman discussed his results first in terms of its uniformity and then in terms of its ambiguity:

> The surprising point is the relative uniformity in the size of the correlations. Between the highest and lowest there is a statistically significant but not conspicuous difference. In so far as agreement is related to happiness, no item appears either outstandingly important or unimportant. This impression is further borne out by inspection of Table 12 which reveals that (with the exception of "religion" on which agreement is most frequent) one item is about as fertile a ground for disagreement as the other.
> . . . . . .
> Once again, the correlation itself does not tell whether frequent disagreement is a cause or simply an overt expression of unhappiness. However, the latter seems the more likely explanation when we examine the individual items and their relative correlations with happiness scores.[26]

Again Terman could not interpret the significance of his results because there was no theoretical or research foundation from which the cause and effect relationship could have been deduced.

Predicting Success or Failure in Marriage

In many respects Burgess and Cottrell's normative study[27] is a cross-validation of the findings in Terman's study. Generally the problems studied were similar, with similar instrumentation, for similar populations. Aside from obvious technical differences, the main difference between the two studies was that Burgess and Cottrell made explicit their assumptions and definitions of variables while Terman tended to ignore these aspects of his research design. Burgess and Cottrell defined marital adjustment in the modern conception of marriage as personal rather than social. In terms of assimilation it is the integration of a couple in a union in which the two personalities

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[26] Ibid., p. 72.

[27] E. W. Burgess and L. S. Cottrell, Jr., Predicting Success or Failure in Marriage (New York: Prentice Hall, 1939).

are not merely merged or submerged but interact to compliment each other for mutual satisfaction and the achievement of common objectives. "A well adjusted marriage from the point of view of this study may then be defined as a marriage in which the attitudes and acts of each of the partners produce an environment which is favorable to the functioning of the personality of each, particularly in the sphere of primary relationships (page 10)."

It was hypothesized that the following five variables were positively related to marital happiness:

1. Essential agreement of husband and wife upon matters that might be made critical issues in the relationship.
2. Substantial number of common interests and joint activities.
3. Frequent overt demonstrations of affection and mutual confidence.
4. A lack of complaints and disatisfactions with the marriage.
5. A lack of feeling of loneliness, misery, irritability, not being self confident and not being bothered by some particular thoughts.

The above hypotheses were tested through development of an instrument to measure various aspects of marital adjustment. The first phase of the development involved the administration and analysis of a marital happiness rating scale. Burgess and Cottrell asked 317 wives, 153 husbands and 30 couples from Chicago and vicinity to rate the happiness of their marriage. An analysis of these ratings revealed the following:

1. Happiness in the minds of present-day Americans is the major criterion of successful marriage.
2. In spite of difficulties of definition and in spite of the varying conditions under which different marriages are happy, most persons can give an estimate of what they consider to be their degree of happiness in marriage.
3. Husbands and wives usually agree in their estimates of their marital happiness.
4. An outsider who is fairly well acquainted with a married couple will generally agree with a member of a couple on his happiness rating.

5. Two outsiders reasonably familiar with a given marriage will usually agree in their appraisals of the marriage.
6. People's estimates of the happiness of their marriage do not fluctuate markedly over short periods of time.
7. Happiness ratings, although reliable and stable on a five point scale, are satisfactory for crude classification but not for precise and discriminating measurement of adjustment in marriage.
8. Happiness ratings report the subjective impression of the married couple but give no indication of the conditions making for the success or failure of the marriage.
9. Happiness ratings, however, may be found of value as a guide in the construction of an index of marital adjustment.[28]

The relevance of a happiness rating to the current thesis is that the initial selection of adjusted couples is to be conducted with the help of their happiness ratings.

Burgess and Cottrell used their happiness ratings as a criteria for factors of yet unknown relationships to marital adjustment. After the development of the happiness scale, their adjustment scale construction followed six steps. Each adjustment item in the schedule could be answered in two or more ways. Accordingly, the different answers to each item were correlated with the rating for marital happiness. The various answers to each of the 26 adjustment items were assigned their appropriate weights, as indicated by the above procedures. An adjustment score for each couple was computed by taking the sum total of the weights of the answers given to the 26 items by the husband and wife. The reliability was estimated by correlating the scores of 66 husbands and wives independent of the study (Pearsonian R + .86). The validity of the scale was determined by comparing it with the marital rating (tetrachoric R + .92), with the common sense derived

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[28] Ibid., p. 46.

scoring weights (tetrachoric R + .95), with the couples who were divorced or separated, with couples contemplating divorce or separation, and with couples who had not contemplated separation or divorce (tetrachoric R + .89).

Although Burgess and Cottrell's attempt to develop norms for marital adjustment suffers from some of the same defects as Terman's study (i.e., the norms are not representative because the sample is drawn from only the middle and upper-middle classes), their research design manifested a number of attributes. The research problem was clearly stated in theoretical and operational terms. The variables to be measured were clearly defined and selected in accordance with the operationally stated problem. The hypotheses were logically deduced from the theoretical statements about the nature of marriage in the day and age.

The marital adjustment scale was not derived from directly observable variables. However, the criteria variables were empirically validated. Weighting of the items was empirical, and the errors of the scale were thoroughly discussed. The authors attributed their errors in predicting marital adjustment to the lack of employing measures of personality in their scale. They state,

> (1) The adjustment index is fairly sensitive to the degree of adjustment in marriage. (2) The prediction score taken by itself is a very crude index of the probabilities for good adjustment. (3) Personality factors are extremely important and need to be taken into account if we are to understand relationships in any marriage. (4) If some measure of personality factors can be included in the prediction score, the precision of the predictions would be greatly increased. (5) In cases in which there is a marked divergence between prediction score and adjustment index, case studies should be made to reveal the role of personality factors in marital adjustment.[29]

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[29] Ibid., p. 312.

The major conclusions of the study being reviewed are that wives make the major adjustment in marriage, the husbands' background factors are much more important than the wives' background factors for adjustment in marriage, economic factors by themselves are not significant for adjustment in marriage, affectional relationships in childhood condition the love object choice of the adult, and the socialization of the person is significantly related to marital adjustment. These conclusions were consistently interpreted in accordance with the results of the study. However, the authors should have confined their conclusions to the population studied.

Burgess and Cottrell's first hypothesis (Essential agreement between husband and wife upon matters that might be made critical issues in the relationship is correlated with marital adjustment), its measurement, analysis and findings are directly relevant to the present paper. Burgess and Cottrell decided upon eleven areas of family life, on an a priori basis, as possible critical areas in marriage. The subjects were asked to rate their agreement or disagreement in these areas with their mates along a five point scale. Table 2.4 reports the correlations of the subjects' ratings with marital happiness as taken from page 50 of Burgess and Cottrell's book, Predicing Success or Failure in Marriage.

Table 2.4. Correlation between Ratings of Marital Happiness and Extent of Agreements and Disagreements

Items of Agreement and Disagreement	Correlation of Rating of Marital Happiness with Extent of Agreement	
	Coefficient of Contingency	Tetrachoric Coefficient of Correlation(r)
Handling finances	.504	.69
Recreation	.477	.65
Religious matters	.281	.38
Demonstration of affection	.451	.65
Friends	.469	.60
Intimate relations	.503	.61
Caring for baby	.409	.40
Table manners	.215	.33
Matters of conventionality	.433	.51
Philosophy of life	.478	.62
Dealing with in-laws	.456	.66
Manner of settling disagreements	.452	.70

Table 2.5 presents the areas manifesting marked, moderate and low correlation with marital happiness as taken from page 51 of Burgess and Cottrell's book, Predicting Success or Failure in Marriage. In interpreting Table 2.4, page 37, and Table 2.5 the authors suggested that disagreement of mates on items manifesting a marked correlation with happiness may indicate peril in the marital relationship. The general intercorrelation of the measured areas suggested that particular items of disagreement may be symptomatic of the couple's underlying maladjustment. Certain items of agreement and disagreement were not independant variables--on the contrary; each correlated highly with all others.

Table 2.5. Relation of Items of Agreement and Disagreement to Ratings of Marital Happiness Items of Agreement and Disagreement

Marked Correlation	Moderate Correlation	Low Correlation
Handling finances	Caring for baby	Religious matters
Recreation	Matters of conventionality	Table manners
Friends		
Demonstration of affection		
Philosophy of life		
Intimate relations		
Dealing with in-laws		

The importance of Burgess and Cottrell's findings of seven areas in which agreement or disagreement of the mates showed marked correlation with marital happiness is that these seven areas will provide the limits within which the current thesis will investigate marital adjustment. It may be noted that Burgess and Cottrell made no effort to determine if the eleven areas chosen were actually critical areas for each pair of mates.

The current thesis is concerned with making a discrimination of this type.

Further Developments with Existing Scales

The 1940's gave rise to a number of marital studies in which the Burgess and Cottrell's and the Terman's scales were used as criteria. Schroeder[30] surveyed 410 divorced and 406 married subjects in a city having a population of 100,000. Williams[31] used the Burgess and Cottrell marital adjustment test to study factors associated with adjustment in marriages in rural New York State. Kelley[32] first did a validation study on the weights of the items in the Terman marital happiness test and then studied perception of mates by mates as a new dimension for scaling marital adjustment.

In his first study Kelley administered the Terman marital happiness test to an entirely different population of unmarried subjects. The scoring weights were valid in predicting the marital happiness of these subjects which was to ensue. Kelley's study was longitudinal. He concluded that in spite of theoretical objections to assigning prediction weights on the basis of mere correlation Terman's weights seemed valid.

Kelley's second study was the first to implicitly assume the theory of personality which implies that marital adjustment is a function of the perception of the mates towards the mates. He gave the example of a

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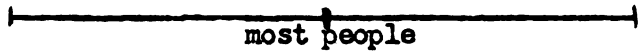
[30] C. W. Schroeder, Divorce in A City of 100,000 Population, 1939, Chap. 6 as cited by H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951).

[31] Edith Williams, Factors Associated with Adjustment in Rural Marriages (Ithaca, New York: Cornell University Library, 1938).

[32] E. L. Kelley, "Concerning the Validity of Terman's Weights for Predicting Marital Happiness," Psychological Bulletin, XXXVI (1939), pp. 202-3; and "Marital Compatibility as Related to the Personality Traits of Husbands and Wives as Rated by Self and Spouse," Journal of Social Psychology, XIII (1941), pp. 193-8.

husband and wife both believing that the husband was the more intelligent of the mates. In this case the believed difference in I.Q. may be more operative as a factor in marital adjustment than the actual tested difference in I.Q.

The research problem of the study was to measure the relation between marital compatibility and the husband, wife judgements regarding their position on a number of personality traits. Five hundred blanks were sent out to a random mailing list of married couples in five Connecticut cities. Seventy-five of these couples who were married from 1 to 45 years filled out the Burgess and Cottrell and the Terman marital adjustment tests. The subjects were then asked to rate themselves and their mates on 36 graphic personality continuims. For example, "How intelligent is your mate?"



This type of rating scale was known to be reliable for rating personalities of acquaintances, but nothing was known about its reliability for self ratings.

An index of marital compatibility was derived by the weights of the two adjustment scales used, and this index was found to be unrelated to the number of years the couples were married and the age difference between the mates.

In comparing the ratings of the entire sample it was found that (1) there was no significant difference between the average self ratings of husbands and wives, (2) there were no significant differences between the average husbands' ratings of wives and average wives' ratings of husbands, (3) husbands rated themselves significantly lower than they were rated by their wives, (4) wives rated themselves significantly lower

than they were rated by their husbands, (5) husbands rated themselves significantly lower than they rated their wives, and (6) wives rated themselves signiificantly lower than they rated their husbands.

A high marital adjustment index for the husband was associated with the following ratings:

1. tendency for husband to rate wife higher than she rated herself
2. tendency for wife to rate husband higher than he rated himself
3. tendency for husband to rate wife higher than he rated himself
4. tendency for wife to rate husband higher than she rated herself
5. high self ratings.

Ratings one through four were also associated with a high marital adjustment index for the wives. High self ratings by wives were not significantly associated with a high marital adjustment index. Kelley concluded that a high degree of marital compatibility seemed to be associated with the willingness of both husband and wife to admit superiority of their spouse and each mate rating himself as above average on most personality traits.

There were a number of aspects of Kelley's study which cast some doubt on the validity of his results. Less than 20 per cent of the random sample sent test blanks returned them. The probabilities that the sample remained random are poor. Secondly, there were no cross validation procedures built into the research design in order to insure that the results were not peculiar to the sample. The personality traits rated were not previously validated, nor did they represent a sample of a theoretical universe of personality traits. No allowance was made for

the number of traits which were significantly related to marital adjustment by the chance factors which are operative in large numbers of statistical operations.

Six further studies of marital adjustment were published during the 1940's. None of these studies purported to contribute different types of measuring instruments of adjustment in marriage. They will be briefly reviewed in order to maintain the flow of the sequential order which leads to later attempts to scale marital adjustment.

One hundred engaged couples were studied by Winch[33] in order to validate the previously developed Burgess-Wallis Engagement-Adjustment Test. His sample was drawn from Chicago and vicinity.

The amount of time required for adjustment in marriage was studied in Michigan and vicinity. Self ratings on a five-fold happiness scale was used as the criterion for 409 couples.[34]

Terman published two articles[35] which summarized his studies of 643 "geniuses" and their spouses. His criterion of marital adjustment was the previously constructed Terman marital-happiness test.

In another survey[36] the subsequent adjustment of divorced people who remarried was investigated using the Burgess-Cottrell marital

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[33] R. F. Winch, "Personality Characteristics of Engaged and Married Couples," American Journal of Sociology, XLVI (1941), pp. 686-97.

[34] J. T. Landis, "Length of Time Required to Achieve Adjustment in Marriage," American Sociological Review, XI (1946), pp. 666-77.

[35] L. M. Terman and M. H. Oden, The Gifted Child Grows Up: Twenty-Five Years' Follow Up of A Superior Group (1947), chap. 19 as cited by H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951); and "Predicting Data: Predicting Marriage Failure from Test Scores," Marriage and Family Living, XII (1950), pp. 51-4.

[36] H. J. Locke and W. J. Klausner, "Marital Adjustment of Divorced Persons in Subsequent Marriages," Sociology and Social Research, XXXIII (1948), pp. 97-101.

adjustment test. The adjustment of the employed wife[37] and the possibilities of estimating adjustment in marriage from adjustment in engagement[38] were also studied during this period.

Predicting Adjustment in Marriage

Locke's[39] large scale study of divorced and happy couples was the first publication in the area of marital adjustment which boasted of a representative sample and a clear-cut criterion of maladjustment in marriage. Divorce and happiness in marriage were selected as criteria because significant differences are more likely to be revealed when the extremes of a continuim of behavior are compared. The author assumed that adjustment in marriage varies along a continuim from those few couples who approach 100 per cent to those few couples who are almost completely maladjusted.

Locke recognized that the second criterion, marital happiness as rated by someone well acquainted with the couple, would be open to criticisms. He defends the use of this criterion in the following statements:

> Two answers are available to the question of the adequacy of "happiness in marriage as judged by an outsider" as a criterion of marital adjustment. The first was provided by Burgess and Cottrell who, in their study of success or failure in marriage, found that an outsider who is fairly well acquainted with a married couple will rate the happiness of this marriage about the same as

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[37] H. J. Locke and M. Mackeprang, "Marital Adjustment and the Employed Wife," American Journal of Sociology, LIX (1949), pp. 536-8.

[38] E. W. Burgess and P. Wallin, "Predicting Adjustment in Marriage from Adjustment in Engagement," American Journal of Sociology, XLIX (1944), pp. 324-30.

[39] H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951).

> a member of the couple will rate the happiness of the marriage...
>
> The second answer to the question is provided by the present study. A later chapter on "Measuring Adjustment in Marriage" gives a detailed discussion of a marital-adjustment test given to the two groups to see if the happily-married got high scores on the test and if the divorced secured low scores. The fact that this was discovered to be the case justifies the use of divorce as a criterion of marital maladjustment, and of "happiness in marriage as judged by an outsider" as a criterion for marital adjustment.[40]

The procedure of the study was to discover a series of items which would separate those who were succeeding from those who were failing to adjust in marriage. Weights were then assigned to the various answers given for each of the items. Generally, the chi square or critical ratio statistics were used to determine if the discrimination of items for the sample were due to chance factors.

In discussing the integrity of the subjects' responses, Locke implicitly assumes the theoretical frame of reference from which hypotheses in the current thesis will be deduced. The consequence, marital adjustment or maladjustment, is a function of the mates' perception.

> ...The important thing is not whether the reported behavior actually occurred, but the meaning of the behavior for the subject. For prediction purposes it is very important to know whether a person thinks of the mate as stingy or simply thrifty, irresponsible or just having hard luck, being too easily influenced by others or merely being considerate of others, and being grouchy or behaving like a little boy when irritated. The integrity of the subjects' responses should be thought of in terms of whether or not they assist in predicting the probably future behavior of the person in a given activity--in the present case adjustment or maladjustment in marriage.[41]

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[40] Ibid., pp. 3-4.

[41] Ibid., p. 7.

The unrepresentative samples of previous major studies of marital adjustment have already been mentioned. One of the major achievements of Locke's study was his representative sample. Divorced samples were selected from the courthouse files in a single county in Indiana. Happily married couples were selected from the same county if they were recommended by a friend or relative as one of the most happily married couples known to the person making the recommendation.

All of the divorced and happily married couples who could be located were contacted and an attempt was made to persuade them to participate in the study. The divorced sample included 201 persons with their respective mates, plus 123 persons where only one side of the case was secured; of these, 50 were men and 73 were women. The married sample was composed of 200 persons with their respective mates, plus 4 cases where only one side was secured.

The marital adjustment scores did not differ greatly with duration of marriage. The social characteristics of both samples were similar to those of the general population from which they were drawn. The median grade completed in school for both husband and wife was 8.9 for the divorced group and 9.5 for the married group, compared with 8.6 for the United States and 8.7 for Indiana in 1940. There were no Jewish subjects in either sample, and there were no more than 3.8 per cent Catholic subjects in either the married or divorced groups. The preponderance of subjects were Protestant. The economic factors of the subjects were more representative of the general population from which they were drawn than in the Terman or the Burgess and Cottrell studies.

Locke recognized and stated the limitations of his study. Pertaining to the representativeness of the sample, refusals to participate,

movement away from the community, remarriage of some divorced couples, and methods of securing the sample might have been detrimental factors. Fifteen per cent of the divorced couples and 5 per cent of the married couples who were contacted could not be persuaded to participate in the study.

Although the interviewers were trained in weekly staff conferences, the use of different interviewers might have contributed uncontrolled variation. Sixty-three per cent of the divorced sample was interviewed by the author and a trained assistant. Seventy-seven per cent of the married sample were interviewed by two trained assistants. The remainder of the samples were secured by several other interviewers.

The marital adjustment test of the study is composed of 29 items; 19 items from the Burgess-Cottrell marital adjustment test, 2 adaptations for Terman's items and 8 which were formulated by Locke. Ten of the 29 items formulated asked for the extent of agreement or disagreement of various areas known to be correlated with marriage. Essentially, the same areas which manifested marked correlation with marital adjustment in Burgess and Cottrell's study manifested the same relationship in Locke's study.

Although there were some differences in the items, the weights of Burgess and Cottrell's items and the weights of Locke's scale were highly correlated (.85--married men; .83--divorced men; .88--married women; .87--divorced women).

Table 2.6 reports from page 54 of Locke's book, Predicting Adjustment in Marriage, that about one-fourth (24.7 per cent) of the divorced couples overlapped the married couples' scores. An examination revealed that they had gotten along fairly well in most things which accounted

for their relatively high adjustment scores. However, they had values so different on one or two kinds of behavior that the marriage was thrown out of adjustment. Of these divorced couples 57.9 per cent considered adultery the main cause of divorce; 23.7 per cent considered their mate's paying attention to another person the major cause, and 18.4 per cent considered troubles with in-laws the major cause of their divorce.

Table 2.6. Per Cent of Happily Married and Divorced Couples Whose Average Combined Marital Adjustment Scores Fell in Specific Intervals

Score (Per Cent of Total Possible Score)	Married Couples N = 196	Divorced Couples N = 154
95-99	14.8	...
90-94	34.2	...
85-89	23.5	...
80-84	14.3	3.3
75-79	8.2	5.8
70-74	3.0	15.6
65-69	2.0	26.6
60-64	...	22.7
55-59	...	18.8
50-54	...	6.5
45-49	...	0.7
Total	100.0	100.0

The variance between mates' adjustment scores was much greater for divorced couples when compared with the happily married couples. Almost half of the married as compared with about a fifth of the divorced spouses had less than a five point divergence between their adjustment scores. Fifteen or more points divergence was found for 11.5 per cent of the happily married couples and for 37.0 per cent of the divorced couples.

Locke pays more attention to the perceptual and affective factors in marriage than earlier investigators. He stated,

> Couples differ not only in the number and kind of difficulties in their marriages, but in the intensity of feeling about the difficulties. Couples who are strongly attached to each other, who are secure about each other even in times of disagreement, feel differently about marital problems and difficulties than those couples whose personal attachments are weaker, whose marriage is threatened with disruption, and who are inclined to hurt each other through angry, irritated and critical reaction.[42]

Although he ignored the probable interaction between the nature of marital difficulties and the feelings of mates toward these difficulties, he did set out to investigate the degree of feelings expressed during periods of marital difficulties. He found that the divorced couples felt significantly more lonely, miserable, irritated, insecure, worried, hurt, self-confident, and critical of mate during periods of marital stress than happily married couples.

Giving credence to the role of perceptions and mates' agreement in their perceptions, Locke hypothesized that happily married men and women would have a higher degree of agreement in their self and mate-ratings than would divorced men and women.

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[42] Ibid., p. 81.

For happily married men there were no significant differences between their self and mate ratings on 16 personality variables; for happily married women only 1 of the 16 ratings were significantly different.

In their ratings of self and mate, divorced men varied significantly on 11 of the 16 personality traits and divorced women varied significantly on 14 of the 16 personality traits. In all cases the divorced subjects rated themselves in a more favorable light than their mates. Divorced subjects tended to rate their mates lower than themselves in assuming responsibility readily, having a sense of humor, being sociable, getting over anger quickly, being affectionate, and yielding in arguments. However, they rated their mates higher than themselves in being easily influenced by others, getting angry easily, and being dominating.

The advances in methodology of Locke's study afford some assurance of the validity of his results. Specifically notable were Locke's criteria variables, tests of item validity against the criteria variables, explicit attribution of error variance, and the adequacy of sampling. However, lack of cross validation and meager data insuring reliability of the adjustment scale would suggest a degree of caution in interpreting Locke's findings.

Current Attempts to Scale Marital Adjustment

A characteristic of the current attempts to scale marital adjustment is that they are personality orientated. Acturial variables are held constant while the personal variables of perceptions, needs, and values are investigated. It is believed that the reasons for the shift in focus of marital research were threefold:

1. Hypotheses born out of the recently developed practice of marital counseling were by and large personality orientated.
2. Research which dealt with actual functions of marital adjustment could not account for the often encountered superstructures of conflict in marriage indeterminable from the acturial statistics.
3. The disciplines of counseling and clinical psychology have devoted greater attention to marital research. Their particular interest in perceptual processes has led to an application of their knowledge in this area to marital research.

In 1953 Swan[43] attempted to investigate the low statistical relationships between various inventories and adjustment factors in marriage. Using the MMPI because of its capacity for empirical validation of self-rating items, the investigator secured data for 101 married couples residing in the Twin City area of Minnesota. These couples were the first to return an initial questionnaire in a longitudinal study on marital adjustment being carried out in the Family Life Division of the University of Minnesota. No claim was made for the randomness of the sample.

Half of the couples had at least one child and most of the subjects had more than two years of college education. Half of the wives worked outside the home, and the religions of the couples were widely distributed. The occupational levels of the husbands ranged from professional to managerial and sales.

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[43] R. J. Swan, "The Application of Couple Analysis to the MMPI in Marriage Counseling," (unpublished doctoral dissertation, The University of Minnesota, 1953); "Using the MMPI in Marriage Counseling," Journal of Counseling Psychology, IV (1957), pp. 239-44.

The best differentiating items from Locke's marital adjustment scale plus Terman's happiness scale were used as a criterion measure. Weights were assigned to the criterion measure on an a priori basis and then adjusted in accordance with the empirical data to provide for the optimal internal consistency. A test-retest reliability coefficient of .92 was obtained for 105 of the 202 subjects. The minimum time for repeating the scale was three weeks and the maximum was six weeks. The nine clinical scales as well as five non-clinical scales of the MMPI were administered to the subjects.

An average score of the couple as well as individual scores on the criterion instrument was used to divide the subjects into five groups:

Group A (20 couples). These couples were in strong agreement that their marriage was satisfactory.

Group B (20 couples). Here both spouses tended to be satisfied with the marriage but the husband was more so.

Group C (20 couples). This was the "average" group. The marriage tended to be satisfactory, and both husband and wife agreed.

Group D (20 couples). This group contrasted with Group B. Both spouses tended to be satisfied with the marriage but the wife more so.

Group E (21 couples). This group was in contrast with Group A. The couples were in general agreement that the marriage was not satisfactory.

The general comparison of the predictor (the MMPI) and the criterion (marital adjustment) was divided into three methodological approaches: (1) each of the 14 MMPI scales used in this study were examined for their effectiveness in differentiating the criteria groups, (2) Welsh's Anxiety Index and Internalization Ratio were utilized in two differentiating procedures, and (3) two pattern analysis procedures, the Code Comparison and the Differential Index (Gelberstadt) were employed the same way.

The hypotheses were: (1) there were no differences among five criterion groups on the sums of couples' scores on the various scales and configural analyses of the MMPI, (2) there were no differences among the five criterion groups on the differences between husbands' and wives' scores on the various scales and configural analyses of the MMPI, and (3) there were no differences among the five criterion groups as to qualitative relationship on the various scales of the MMPI when these criterion groups were compared with the four groups based on a distribution of sums and differences.

The findings of the study are reported in Table 2.7. The happily married couples scored significantly lower on the Pd, Pt and Ma scales and scores significantly higher on the Re (social responsibility) scale in comparison to the less happily married couples. In addition, the Pt scale showed that the greater difference between wives' and husbands' scores on the scale the less happy the marriage; the internalization ratio score showed that when either the husbands or wives were more disatisfied with marriage than their respective mates, they kept their feelings to themselves more than their happier mates.

The results of Swan's study suggested the same hypothesis first suggested in 1939 by Burgess and Cottrell's findings, i.e., the wife is the more influential mate for determining the state of marital satisfaction. Swan concluded that pending confirmation of results through cross validation, the MMPI may be used as a diagnostic instrument in marital counseling.

Table 2.7. Findings of the Three Methodological Approaches in a Comparison of Five Levels of Marital Adjustment on Various MMPI Scales

Scale	Analysis of Variance: Sums	Analysis of Variance: Differences	X^2	t-test: Sums	t-test: Differences
K	NS	NS	NS	A $E_{.05}$	
Hs	NS	NS	NS		
D	NS	NS	NS	E $D_{.05}$	B $D_{.07}$
Hy	NS	NS	NS		
Pd	$S_{.05}$	NS	NS		
Mf	NS	NS	NS		
Pa	NS	NS	NS		
Pt	$S_{.05}$	$S_{.05}$	$S_{.05}$		
Sc	NS	NS	NS		
Ma	$S_{.05}$	NS	NS		
Sie	NS	NS	NS	E A,B,C,D $_{.06}$	B A,C,D,E $_{.01}$
Do	NS	NS	NS		
St	NS	NS	NS		
Re	$S_{.01}$	NS	NS		
AI	NS	NS	NS	E $A_{.05}$	B $D_{.01}$
IR	NS	$S_{.05}$	NS		
CC	NS			E A,B,C,D $_{.05}$	
DI	NS				

Swan's study was the first experimental research of marital adjustment fulfilling most of the major conditions of adequacy. The author's hypotheses, deduced from the problem of low statistical relations between inventories and marital adjustment, was capable of empirical verification.

The analysis of variance design allowed for the study of interactional variables as they were manifested in the differences between individual scores and couple scores. Specification of the population, methods of drawing the sample, and levels of significance were complete. The study did not attempt to claim randomness of assignment of subjects to the various treatments. Perhaps the major flaw of the design was the absence of replication. The reporting of the procedure was thorough so that there would be little difficulty in carrying out a future replication. The data was analyzed in accordance with objectives of the study. Evidence for the reliability of the criterion measure was presented.

Swan did not specify in detail how his findings provided for the use of the MMPI as an instrument which would be helpful in marital counseling. Further specification was warranted.

The significance of the study being reviewed is threefold. First, it was an attempt to develop experimentally a scale of marital adjustment based upon personality factors. Secondly, the results of the study suggested that the low statistical relationships between inventories and marital adjustment is perhaps related to the failure to include personality items in previous scales. Thirdly, the hypothesis of the wife's importance for adjustment in marriage was again suggested.

Another current study investigated the relationship between interpersonal perception and marital happiness.[44] The relation of the

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[44] Rosalind Dymond, "Interpersonal Perception and Marital Happiness," Canadian Journal of Psychology, VIII (1954), pp. 164-71.

understanding each mate had of the other's self-concept (as measured by accuracy in prediction) in relation to marital happiness (as rated by the mates and checked by an objective judge) were the operationally defined variables to be studied.

Fifteen couples who were well known to the author participated in the study. The length of their marriage ranged from 6 months to 37 years with a mean of 10.4 years. The couples were asked to rank order ten marriages in terms of happiness and then to designate which of these marriages was most like their own. The associated marriage with their own provided an indirect measure of their own marital happiness. The author rated the happiness of the couples, and the correlation between the couples' own ratings and the author's ratings of their marriage was near perfect.

One-hundred fifteen MMPI items (100 real items and 15 item lie scale) was administered to the subjects. They were asked to answer for themselves and then to predict their mate's answers, affording four types of answers:

1. Husband's own answer
2. Husband's prediction of wife's answer
3. Wife's own answer
4. Wife's prediction of husband's answer.

The first hypothesis, happy couples would be more understanding of their mate than unhappy couples, was confirmed. The happier couples' accuracy of prediction of mate's self-concept was significantly greater than the unhappy couples' accuracy of prediction ($p < .01$). The second hypothesis was that the mates in happy marriages would have more similar responses (to MMPI items) than the mates in unhappy marriages. The

second hypothesis was also confirmed ($p < .01$). The third hypothesis, unhappy mates project more of their own characteristics on their mates than happy mates was not supported. This hypothesis was tested by comparing the correlations of the husband's own answers with his prediction of his wife's answers and vica versa for the two groups. It was notable that the happy group made an equal number of errors in predicting differences where similarities existed and in predicting similarities where differences existed. The unhappy group made significantly more ($p < .01$) of the latter type of errors.

Two incidental findings of the study were that the correlation between length of marriage and prediction of mates' self concept was .004. The husbands and wives were able to predict each other's self concepts equally as well. The accuracy of their predictions correlated .79.

Dymond investigated the reliability of her MMPI scale by the split-half method. The first half of the scale was correlated with the second half yielding a coefficient of .927.

The author suggested that her criterion was valid because of the concurrence of her judgments with the couples' judgments about their marriages. In addition to the concurrence, she had the couples respond to two items which were to be used as an external criterion of validity:

1. "I believe my home life is more pleasant than most of the people I know."
2. "I have fewer quarrels with my family than the rest of the people I known."

All of the couples in the happy group stated that the two items were true for them.

Dymond's study was developed from theoretical concepts capable of operational definition. The development of appropriate operational techniques to investigate the hypothetical structures of self-concept, interpersonal perception and projection were perhaps the most notable attributes of the study.

The design, procedures, and analysis of the study contain sufficient errors to question the validity of the results. The background factors of marriage such as socioeconomic status, age of mates, intelligence, etc. were neither controlled nor incorporated in the design. There was no reference made to the population from which the fifteen couple sample was drawn. The selection of the happy and unhappy couples was carried out in accordance with expert and self judgments. The reliability and validity of the judgments remain unknown although there was an attempt to establish the validity of the judgments by a two item outside criterion. Dymond's study contained no replication of the experiment which was particularly important because of her small sample.

A further development in research on marriage has been Winch's Theory of Complimentary Needs.[45] Although this development does not have direct relevance to the present thesis, it is noted in passing because it is a further example of current recognition of the importance of the personality of the mates for marriage.

Two exploratory studies should be mentioned because of the trend which they illustrated. Both of these studies explored marital adjust-

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[45] R. F. Winch, "Theory of Complimentary Needs in Mate-Selection: Final Results on the Test of the General Hypothesis," American Sociological Review, XX (1955), pp. 552-4.

ment through the perceptual similarity and differences of the mates. Keeley[46] had 237 married couples from the Lincoln, Nebraska area fill out a questionnaire on values and marriage. Each of the subjects responded to the questionnaire anonomously and independently of his spouse.

A significant ($p < .05$) positive relationship was found between mates agreeing on values and marital success. Six values were ordered in accordance with their degree of correlation with marital success. These values listed from highest to lowest were:

1. companionship
2. having children of one's own
3. having someone who cares
4. sexual satisfaction
5. being able to share common interests
6. security.

The author suggested that mates' agreement on the above values were necessary for a successful marriage. However, there is room for variation on the less important values. Keeley stated that his findings contradicted the common sense folklore that "little things mean a lot in marriage."

Thomason[47] explored the extent of spousal agreement on sexual and non-sexual items. He found that husbands and wives tended to agree more on factors of status than on interpersonal relationships and personality or on spousal acts and attitudes. Spouses manifested more agreement on tangible, overt aspects of their marriage and behavior in marriage than

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[46] B. J. Keeley, "Value Convergence and Marital Relations," Marriage and Family Living, XVII (1955), pp. 342-5.

[47] B. Thomason, "Extent of Spousal Agreement on Certain Non-Sexual and Sexual Aspects of Marital Adjustment," Marriage and Family Living, XVII (1055), pp. 332-7.

on intangible covert aspects of marriage and behavior. There was no evidence suggesting greater or lesser spousal agreement on non-sexual items when compared with sexual items.

Corsini[48] was the first investigator to explicitly employ the nascent theory of behavior as a theoretical foundation for research in marriage. He postulated that satisfaction in marriage is a function of the behavioral interaction of couples which in turn is determined by social perceptions. If perception can be understood, then behavioral and effective consequences may be predicted.

> Hypothesis I. Happiness in marriage is a function of the understanding of the mate's self and other: Tested by the correlation between self and mate's self; self and mate's other; and mate's self and mate's other.
>
> Hypothesis II. Understanding between a husband and wife is a function of the degree of similarity between the two selves: Tested by determination of whether understanding of mate's self and understanding of mate's other are functions of similarity of self perception.
>
> Hypothesis III. Happiness in marriage is related to the similarity of the selves of the partners: Tested by difference in correlation of husband's self perception and wife's self perception.

Twenty University of Chicago students were matched on age, education, years married, and number of children. They were administered the Burgess and Wallin Marital Adjustment Test as well as a fifty item test

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[48] R. J. Corsini, "Understanding and Similarity in Marriage," Journal of Abnormal and Social Psychology, LII (1956), pp. 327-32.

of social perceptions constructed by the author. The latter test was composed of words having little or no undesirable characteristics which were to be sorted into ten piles of five words from most descriptive to least descriptive of (1) yourself, (2) your mate, (3) your prediction of your mate's sort for you, and (4) your prediction of your mate's sort for his/herself. Each of the couples were tested simultaneously under supervision.

The results of the study were discussed in terms of stereotypy, validity of Q sort and the hypotheses. In order to determine if the population from which the couples were drawn was a stereotyped one, the men self sorts, women self sorts and all self sorts were correlated. The respective coefficients .33, .32, .28 were not significant, indicating that the couples in the sample were no more alike than couples at random.

The validity of the Q sort was determined by comparing the mean correlations of couples with random non-couples. The couple correlations were significantly higher than the random non-couple correlations on this variable.

The three hypotheses were tested by comparing the correlation of the suggested variables with marital happiness for couples and random non-couples. Hypotheses I and II were not supported. Hypothesis III, similarity of selves in relation to marriage, was solidly supported. Husband's, wife's, and couple's similarity of selves correlated with marital happiness .64, .73, .75 respectively. Men, women, and pairs of random non-couples manifested correlation coefficients of .02, -.01, and .06 respectively. All differences were significant ($p < .01$).

Corsini attached two possible interpretations to the verification of his third hypothesis: (1) People who are similar are more likely to be happier in marriage than people who are disimilar and (2) People who are happily married tend to become similar with respect to self perception.

The adequacy of the experiment being reviewed reflects favorably upon the validity of the results. The newness of the use of random non-couples as a control group as well as a validation group for the experimental instrument makes it difficult to evaluate. The logic for using random non-couples is adequate in that this usage in the study does not violate any of the assumptions of the statistics.

The lack of replication in interaction with the small sample representative of an unspecified population suggested that a repetition of the study is warranted. The value of the experimental instrument will be largely determined by its ability to remain reliable and valid for another sample representing a specified population, if and when such a study is carried out.

Ahmed et. al.[49] investigated whether or not there are factors underlying marital discord which are applicable to people in the United States regardless of race, religion, socioeconomic status, ect. He and his colleagues surveyed 23 women and 27 men (ages 22-50) representing a wide range of economic, social, educational, and intellectual backgrounds. All of the subjects were receiving treatment for marital or related problems. Regardless of the sociological classification of the subjects, the following general psychological factors were manifested:

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[49] E. S. Ahmed, et. al., "Factors in Marital Discord," Journal of Psychology, XLIV (July, 1957), pp. 193-222.

1. Low self opinion
2. Adolescent hangover (i.e., functioning in a number of ways like an adolescent)
3. Early conditioning against marriage
4. Cumulative ego strain
5. Homosexual tendencies
   A. Men--passitivity
   B. Women--revolt against femininity
6. Sexual disatisfaction and projection of blame
7. Flight into feeling rejected.

The findings of the study suggested that it is possible to study psychological factors in marriage regardless of the sociological characteristics of the marriage if the psychological factors are not correlated with the sociological characteristics. However, more rigorous experimentation on the above possibility is necessary before a blanket assumption can be made nullifying the effects of the sociology of the marriage in psychological research.

An extensive study was carried out by Eastman[50] on the relationship between marital happiness and self acceptance. Again the theory "The affective and behavioral consequences is a function of perceptions" (in this case self perceptions) implicitly served as a foundation for the study. Since Eastman's dependent variable is not directly relevant to the current thesis, it should be sufficient to note some of his findings. Self acceptance of husbands, wives, and both mates were significantly correlated ($p < .01$) with marital happiness. Wives influence their husbands' marital happiness regardless of their own marital happiness. Again it is suggested that the wives make the major adjustment in marriage.

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[50] D. Eastman, "Self Acceptance and Marital Happiness," Journal of Counsulting Psychology, XXII (1958), pp. 95-9.

In 1958 a comprehensive factor analysis of the variables in marital adjustment was carried out.[51] The authors proposed three questions to be investigated:

1. Are there items in tests which are doing no work?
2. Do the items cluster together and measure one general factor or do they cluster around several more specific factors?
3. Are the factors independent, with the items measuring one factor or do the items spread over various factors?

Twenty of the best discriminating items from various marital adjustment tests were combined in an experimental test which was to be factor analyzed. The sample consisted of 171 husbands and 178 wives. The couples were selected from three social class areas in Los Angeles: lower class area--63 couples; lower-middle class area--82 couples; upper-middle class area--65 couples. The average age of the sample was 33 years. Over 20 per cent were reared in rural areas and 30 per cent in cities of 100,000 population. Approximately one-fifth of the couples had been married more than once. The median education was about 12 years. A third of the subjects were lower white collar workers, a third were manual workers, and a third were upper white collar workers and professionals. The couples were predominantly Protestant.

The items of the test clustered around five factors which the authors arbitrarily labeled:

1. Companionship or couple sufficiency
2. Agreement or consensus
3. Affectional intimacy or emotional adjustment

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[51] H. J. Locke and R. C. Williamson, "A Factor Analysis Study," American Sociological Review, XXIII: 5 (October, 1958), pp. 562-9.

4. Masculine interpretation or wife's accomodation
5. Euphoria or halo effect.

The second factor, agreement or consensus, which has direct relevance to the present dissertation, is composed of eleven items. Six of these (finances, recreation, religion, choice of friends, in-laws, and aims or goals important in life) appeared only in this factor. Items on sex relations, conventional conduct and time spent together clustered around more than one factor.

Only one of the twenty items had no factorial loading at the selected level on any factor of marital adjustment, namely: What things does your mate do that you do not like. The items clustered fairly evenly on several factors rather than clustering around one factor. Since five of the eleven items in factor agreement or consensus appear clustered around other factors, their elimination may not distract from the value of the test.

Locke and Williamson suggested that marital adjustment should be redefined in terms of the inter-related variables derived from the factor analysis. "Marital adjustment is an adaptation between husband and wife to the point where there is companionship, agreement on basic values, affectional intimacy, accomodation, euphoria and certain other unidentified factors."[52]

The relevance of Locke and Williamson's results for the current dissertation are threefold. First, their findings suggested that the areas chosen for scaling are factorially pure with exception of agreement or consensus on sex relations. Secondly, their identification of five factors in marital adjustment would suggest that a wide range of

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[52] Ibid., p. 569.

items covering a large number of variables would be necessary to adequately scale adjustment in marriage. Lastly, the similarity between the factors they identified and the factors which are to be studied in the current dissertation suggests that by and large the latter possesses factorial validity. Factor 1, companionship, is represented in the current author's scale by items subsumed under the classifications of "Recreation" and "Friends". Factor 2, agreement, is currently represented in the type of response required from the subjects. A pool of twenty items in the current scale represents Factor 3. Factor 4, masculine interpretation, is not used in any way in the current scale; and Factor 5, halo effect, is currently considered in a number of specific items dealing with perceptions of what a mate should be like.

Hobart and Klausner[53] investigated the relationships between empathy, communication, role disagreement and marital adjustment. The married, full-time resident students at a small sectarian college were contacted three times and given a number of tests related to the variables for study.

Communication was operationally defined in terms of 26 questions regarding husband-wife communication. Nineteen of these items dealt with barriers to communication and the remaining seven dealt with empathic communication. Testing was carried out in three sessions. In February couples were asked to rate themselves and their mates on various communication items. In April couples were asked to respond to a marital role opinions survey in the same manner they responded to the

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[53] C. W. Hobart and W. J. Klausner, "Some Social Interactional Correlates of Marital Role Disagreement and Marital Adjustment," Marriage and Family Living, XXI (1959), pp. 256-63.

first test. In May the criterion measure, Burgess-Wallin Prediction Test--Part II, was administered to both the mates.

Correlational analysis was used to obtain statistical results. The coefficient for male adjustment and total communication was .39; respectively, the women correlated .54 on this variable. Empathy was negatively correlated with marital adjustment for the females, and there was little correlation with marital adjustment for the males. No significant patterns between empathy and communication were found.

Role disagreement was significantly and negatively related to empathy and empathic communication but not to communication in general.

The authors tentatively concluded (1) communication is significantly related to marital adjustment for both husband and wife. (2) Barriers to communication may be more importantly related to marital adjustment, and empathic communication may be more closely related to role disagreement. (3) Psychological empathy (insight into how the mates rate themselves as a person) is more closely related to marital adjustment than is marital role empathy (insight into the marital roles which the mate expects himself and wife to play). (4) There is no relationship between role disagreement and marital adjustment.

Hobart and Klausner studied a number of interactional factors in marriage in such a way that the validity of their results is dubious. No hypotheses, aims or purposes of the study were stated. Therefore, any findings that are stated can only be justified as post hoc. The correlations which were computed were relevant to the extent that they show relationships; however, the significance of the relationships cannot be determined by statistical inference without an a priori statement of hypotheses.

The design of the study warranted clarification. Instruments which were used for grouping of the subjects were also being used as criteria. Variables given independent status in one comparison were given dependent status in following comparisons. In addition, there were no external criteria of validity for some of the measuring instruments set up. Due to the methodological errors of the study, the findings were not given consideration in the foundation for the current dissertation.

The Development of the Criterion Instrument

Locke and Wallace[54] hypothesized that reliable and valid adjustment and prediction tests could be constructed by using a limited number of the most significant items taken from studies made prior to this one. They proceeded by recording items which proved to be significant for adjustment and prediction in marriage. The items were checked to make sure that each referred to a different aspect of marriage. Fifteen items were chosen for the adjustment test and thirty-five items for the prediction test. Using the previously established weights for the items, the range of scores possible for the adjustment test was from 2-158. The prediction test will not be considered any further since it is not relevant to the current study.

The sample consisted of 118 men and women representative of 236 marriages. They were young, native-white, Protestant, white collar or professional workers, and urban residence. The mean length of marriage for the females was 5.6 years and 5.3 years for the males. Subjects married less than one year were excluded.

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[54] H. J. Locke and K. M. Wallace, "Short Marital Adjustment and Prediction Tests: Their Reliability and Validity," Marriage and Family Living, XXI (1959), pp. 251-5.

The reliability of the test was established by the Spearman-Brown Split-Half method. The coefficient was .90. Twenty-two of the males and twenty-six of the females were known to be maladjusted. They were matched with twenty-two males and twenty-six females known to be well-adjusted. The mean score of the maladjusted subjects on the experimental test was 71.7 while the mean score of the well-adjusted subjects was 135.9. The difference was significant (p .01). Only 17 per cent of the maladjusted group scored above 100 whereas 96 per cent of the well-adjusted group scored above 100. The authors accepted the reliability and validity of their adjustment test as confirmation of the hypothesis.

The construction of Locke-Wallace Marital Adjustment Test is at least as adequate as the construction of previous scales purported to measure adjustment in marriage. The major shortcoming of the study is the lack of cross validation, a shortcoming noted in all attempts of marital scale development which have been reviewed. Furthermore, the contentions that the maladjusted group was maladjusted and the well adjusted group was well adjusted must be taken on faith since no empirical evidence was reported to support the contention. It is believed that the value of the study is an economic one. It affords a measuring instrument with at least the same adequacy of development as previous scales and can be administered and scored in a few minutes.

Summary

The importance of background factors in marriage were discussed, and their status as variables in the present thesis were clarified. The philosophical foundations for handling correlation between psychological and sociological findings were discussed with particular reference to reductionism.

Economic factors, the impress of cultural background, age and duration factors were reviewed in an effort to discover which of these variables or the specific factors subsumed under them were necessary to have purposefully controlled.

The major portion of the chapter was devoted to a review and critique of attempts to scale marital adjustment. Starting with the early normative studies in the area of marital adjustment, each study was reported according to its date of publication. A few trends were evident. Early studies focused on gross acturial variables while current studies focused on subtle personality variables. Early studies attempted to survey areas while later studies attempted to predict the functional relationships among variables. Absence of theories characterized the early studies; implicit theory was present in the later studies, and the explicit specification of theoretical foundations was a recent development. Table 2.8 charts the development of recent attempts to scale marital adjustment, the area in which the studies took place, the size and nature of the sample and the criteria of marital adjustment used.

Lastly, the criterion instrument for determining adjustment in marriage was discussed. Its reliability and validity were considered as well as the attributes and shortcomings of its construction.

Table 2.8. Current Attemps to Scale Marital Adjustment (In the Chronological Order of First Publication): Years 1944-1960*

Author and Publication	Time When Sample Collected	Area of Study	Size of Sample	Criteria of Marital Adjustment
Locke, H.J. Predicting Adjustment in Marriage, New York: Holt, 1951.	1944	A single county in Indiana.	201 divorced couples; 123 divorcees without their mates; 200 happily married couples plus 4 individuals from happy marriages.	Divorced couples; Happiness of marriage as judged by an outsider well acquainted with the marriage.
Swan, R.J. "Using the MMPI in Marriage Counseling," Journal of Counseling Psychology, IV (1957), 239-44.	1953	Minneapolis and St.Paul Minnesota.	101 married couples; The first couples to return an initial questionnaire in a study carried out by the Family Life Division of University of Minnesota.	Best differentiating items from Locke's Marital Adjustment Scale plus Terman's Happiness Scale.
Dymond, Rosalind. "Interpersonal Perception and Marital Happiness," Canadian Journal of Psychology, VIII (1954), 164-71.	1953	...	15 couples well known to the author.	Couples' happiness rating in relation to couples they knew.
Winch, R.F. "The Theory of Complimentary Needs in Mate-Selection: Final Results on the Test of the Test of the General Hypothesis," American Sociological Review, XX:5 (October, 1955), 686-97.	1954	...	50 couples.	Projective techniques and interviews.

* Years 1929 - 1944 compiled by H. J. Locke, Predicting Adjustment in Marriage (New York: Holt, 1951).

Table 2.8. Continued.

Author and Publication	Time When Sample Collected	Area of Study	Size of Sample	Criteria of Marital Adjustment
Keeley, B.J. "Value Convergence and Marital Relations," Marriage and Family Living, XVII (1955), pp. 342-5.	1954	Lincoln, Nebraska.	237 couples.	Couples' attitudes towards their marriage.
Thomason, B. "Extent of Spousal Agreement on Certain Non-Sexual and Sexual Aspects of Marital Adjustment," Marriage and Family Living, XVII (1955), pp. 332-7.	1954	Pennsylvania State University.	641 marriage.	Composite questionnaire of significant items from previous scales.
Corsini, R.J. "Understanding and Similarity in Marriage," Journal of Abnormal and Social Psychology, LII (1956), pp. 327-32.	1955	Chicago.	20 university students.	Burgess and Wallen's Marital Satisfaction Scale.
Ahmed, E.S., et. al. "Factors in Marital Discord," Journal of Psychology, XLIV (1957), pp. 193-222.	1956	...	23 men and 23 women.	40 subjects in psychiatric treatment; 10 maladjusted subjects (one going steady, 5 divorced, and 4 married) from another psychiatric treatment group.
Eastman, D. "Self Acceptance and Marital Happiness," Journal of Counsulting Psychology, XXII (1958), pp. 95-9.	1957	...	50 couples married two years or more. 14 couples married less than two years.	Compilation of most discriminating items from Burgess and Cottrell's and Terman's scales.

Table 2.8. Continued.

Author and Publication	Time When Sample Collected	Area of Study	Size of Sample	Criteria of Marital Adjustment
Locke, H.J. and Williamson, R.C. "Marital Adjustment: A Factor Analysis Study," American Sociological Review, XXIII:5 (1958), pp. 562-9.	1957	3 social strata in Los Angeles.	63 lower class strata couples; 82 lower-middle class strata couples; 65 upper-middle class strata couples.	Most discriminating items predominantly from the Locke Marital Adjustment Scale.
Hobart, C.W. and Klausner, W.J. "Some Social Interactional Correlates of Marital Role Disagreement and Marital Adjustment," Marriage and Family Living, XXI (1959), pp. 256-63.	1958	small sectarian college.	59 couples living on campus.	Burgess-Wallin Marital Prediction Test--Part II.
Locke, H.J. and Wallace, K.M. "Short Marital Adjustment and Prediction Tests: Their Reliability and Validity," Marriage and Family Living, XXI (1959), pp. 251-6.	1958	urban.	118 men and women predominantly young, native, white, educated Protestants.	22 maladjusted males and 16 maladjusted females.

CHAPTER III

THE DESIGN OF THE STUDY

The Design

The present study is designed to accomodate the variables known to be relevant in scale development and marital adjustment research. The assumptions underlying the independent variables are stated followed by a discussion of the derivation of the dependent variables. Identification of and methods of coping with extraneous variance are presented followed by an overview of the sample and a diagrammatic design of the study.

The Independent Variables

Adjustment and maladjustment in marriage are the two independent variables of the current study. It was assumed that adjustment in marriage varies along a continuim from those few couples who approach 100 per cent adjustment to those few couples who are almost completely maladjusted. It was also assumed that couples starting procedures for divorce as well as couples receiving marital counseling would represent the lower end of the continuim while couples earning high scores on a reliable and valid marital adjustment test would represent the higher end of the continuim. If the two criteria represent the extremes of marital adjustment, then a comparison of the two groups on a number of items would reveal those items which are neutral with repect to marital adjustment and those items which discriminate between adjusted and maladjusted couples.

The Dependent Variables

The dependent variables of the experiment are the consensus of mates' perceptions on the truth or falsity of issues, the consensus of

mates on the perceived importance of issues, the configuration of the above variables and the content of the experimental scale--the Issues Scale.

Consensus of Mates on Issues

The consensus of mates on the truth or falsity of issues derives its status as a variable related to marriage from Terman's and from Burgess and Cottrell's normative studies and every major attempt to scale development since the early studies. In each of these studies a high weighting was given to between six to fifteen areas in which consensus of mates was found significantly related to marital adjustment. The typical consensus or agreement item found on previous scales was constructed by having a member of a couple rate his agreement with his mate along a continuim from "always agree" to "always disagree" in an area, such as handling finances. The weights of the various ratings for marital adjustment were then determined by their respective correlations with marital happiness. Irrevocably, the greater the agreement of mates on eight or nine areas, the greater was the marital happiness. In 1957 Locke and Williamson established the factorial validity of consensus or agreement for marital adjustment.

It was inferred from Kelly's corollaries numbered 10 and 11 (supra, pp. 5-6) that if gross areas such as "Intimate Relations" and "Philosophy of Life" are significantly related to marital adjustment, then items describing the specifics of the gross areas would also be significantly related to marital adjustment as well as pin pointing agreements and disagreements between mates. For example, in the area of "Intimate Relations" the item, "Having sexual intercourse is sometimes annoying", because of its derivation from an area known to be

related to marital adjustment would be expected to be related to marital adjustment more so than would be an item chosen at random. It is therefore expected that if twenty items are chosen to represent an area of known merit, a portion of these twenty will discriminate between maritally adjusted and maladjusted couples. One of the unique aspects of the study is the systematic exploration of areas known to be grossly related to marital adjustment.

Consensus of Mates on the Perceived Importance of Issues

The consensus of mates on the perceived importance of issues derives its status as a variable related to marriage from the personal construct theory of behavior--human behavior is a function of the manner in which individuals perceive events and anticipate consequences. The personal construct theory is applied to marriage by classifying the degree of marital adjustment as the anticipated consequences of the perceptions mates have towards various issues related to marriage. Thus, the behavioral consequence, marital adjustment or maladjustment is a function of the mates' perceptions on issues correlated with marital happiness.

Perception in the study is operationally defined as the strength of feeling or discerned importance of opinions on issues. Therefore, considering the operational definition of perception and the consensus theory described earlier, the personal construct theory applied to marriage may be reformulated: Marital adjustment is a function of the agreement of mates in their opinions and strength of feelings towards various issues correlated with marriage.

The Configural Scoring System

Another unique aspect of the study is that it is the first scale attempting to configurally score responses for marital adjustment in terms of the mates' consensus of the perceived importance as well as their consensus on the truth or falsity of the items. For example, spousal agreement on the truth or falsity and importance of an issue may be more related to marital adjustment than spousal agreement on the importance of an issue but disagreement on the truth of an issue. The relationship suggested by theory is that spousal agreement on the truth or falsity of issues which both mates perceive as personally important are associated with adjustment in marriage. However, previous scale development in marital adjustment research has measured only spousal agreement without giving credence to the importance of the items to the couples. An empirical question which is studied in the current thesis is whether or not the perceptual dimension enhances item discrimination, thus supporting the applicability of the personal construct theory in marital scale research.

The configural scoring system of the experimental scale is constructed to afford six types of spousal responses which are illustrated in Figure 1. The first letter of the configural score always refers to the mates' response on the truth or falsity of the item, the second letter refers to the mates' response on their feelings about the items, and the third letter (when present) refers to the direction of their agreed upon feelings. Agreement on the truth or falsity of an item, regardless of whether the mates agree on their strength of feelings concerning the item is labeled an agreement (A). When mates agree on both the truth or falsity of an item and feel strongly about the item,

they are given a configural score of (A-AS). Examples of the (A-AS) configuration are found in the first two rows of Column I in Figure 1.

Figure 1. The Configural Scoring System for the Experimental Scale

Truth vs. Falsity of Items	Strength of Feeling Concerning Item (Strong vs. Weak)		
	Both Mates Feel Strongly	Both Mates Do Not Feel Strongly	Disagreement On Strength
Both mates agree on truth	Agree-Agree Strong (A-AS)	Agree-Agree Weak (A-AW)	Agree-Disagree (A-D)
Both mates agree on falsity	Agree-Agree Strong (A-AS)	Agree-Agree Weak (A-AW)	Agree-Disagree (A-D)
Disagreement on truth or falsity	Disagree-Agree Strong (D-AS)	Disagree-Agree Weak (D-AW)	Disagree-Disagree (D-D)

According to theory, marital adjustment is a function of the agreement of mates in their opinions when they feel strongly towards various issues correlated with marriage. Spousal response type A-AS meets the theoretical conditions and should therefore be indicative of adjustment in marriage. Spousal response types A-AW, A-D, D-AW, D-AS and D-D fail to meet one or more of the theoretical conditions for adjustment. It is therefore expected that response type A-AS sould be chosen more often by maritally adjusted than maladjusted couples while the other response types should be chosen more often by maritally maladjusted than adjusted couples.

Coping with Extraneous Variables

Two sources of extraneous variance were identified in the study. The first source of extraneous variance is the contribution of sociological characteristics in marriage. The relative importance of these characteristics and their status as variables in the current study are

discussed in Chapter II under the subheading "Background Factors in Marriage". They were treated as correlated variables in marital adjustment. No effort was made to control them because of their concomitant status in the study.

The second source of extraneous variance is inextricably bound up in the responding to the scale. It is the error variance brought about by the susceptibility of all structured personality or attitude tests to "faking", "lying", or unconscious self deception. In addition, a further source of error variance is contributed by subjects who make errors in recording, having reading comprehension difficulties, lack understanding of what is expected, are very confused in their thought processes, and those who try to make themselves look worse than they are for various reasons. Meehl has written extensively about the last source of error which he labeled "faking bad" as opposed to "faking good". A clear example of "faking bad" is that of draftees failing psychiatric examinations in order to be exempted from military service.

Thweatt[1] has extensively described the history and rationale of validity keys, their various merits and implications. For the current study two validity scales are being constructed. The decision of which type of validity scales should be constructed was based upon what are assumed to be the most serious types of errors peculiar to testing for marital adjustment. The validity of the Set T and F scales in the context of marital adjustment testing is assumed a priorally.

One of these two scales was constructed in an effort to identify

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[1] R. C. Thweatt, "The Development and Validation of an F Scale for an Objective Test Battery on Motivation" (Unpublished Ph.D. dissertation, Michigan State University, 1961), pp. 20-57.

rigid response.bias, i.e. the type of responding which falls into rigid monotony because of resistance, boredom, inflexibility, unconcern and other unknown variables. This type of scale has been developed by Fricke[2] and has been labeled the "Set T Scale". It is composed of items eliciting almost random responses because of their controversial nature. It is assumed that if a subject answers a significant number of controversial items in a singular direction that his peculiarity of responding is a source of error variance and this subject should be deleted from the sample.

The second validity scale chosen for the current study is the "F Type Scale" which was originally developed for the MMPI. It is a scale composed of items which are responded to with low frequency by predetermined samples. If a subject responds to a significant number of "F Scale" items in the statistically rare manner, it is assumed that he is either purposefully or unconsciously misunderstanding the task and contributing a source of error variance to the experimental design. Therefore, this subject should be deleted from the sample.

Within the limits of the above assumptions, both validity scales were developed for the "Issues Scale". A further assumption was made regarding the cut-off point for the validity scales. The standard cut-off point for validity scales is a T score of 70. It was assumed in the current study that the rejection of subjects from the sample when they are not a contributory source of extraneous variance was a more serious error than retaining subjects whose responses were actually highly

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[2] B. Fricke, "Response Bias Scale for the Minnesota Multiphasic Personality Inventory," Journal of Counseling Psychology, IV (1957), pp. 149-53.

contributory to error variance. Three criteria were established for setting the cut-off points for the validity scales: (1) the cut-off point should be more stringent than the usual T score of 70, (2) the actual T score should be established at the point where there is a marked schism in the curve of the T scores, and (3) in the case where there is no schism in the curve of T scores the cut-off point should be established at the T score commensurate with a $p < .01$. Considering the lack of empirical validity for validity scales in marital adjustment scales, the above criteria would insure conservative interpretation of validity scale scores.

The Sample

The sample consisted of a maritally adjusted group and maritally maladjusted group. The maladjusted group consisted of couples in which one or both mates were filing for divorce or couples who were obtaining professional marital counseling. The maritally adjusted couples were obtained primarily through the cooperation of various clergymen. In order to qualify as maritally adjusted, the couples had to earn a predetermined score or better on the criterion instrument (supra, p. 67).

One-half of the maritally maladjusted and adjusted couples were assigned to the validation group and the remaining halves were assigned to the cross validation group according to a table of random numbers. In Chapter IV the selection and characteristics of the subjects are described in greater detail.

Diagrammatic Plan of the Design

The design of the study is divided into eight steps which are outlined in Table 3.1. These steps refer to the major operations of the study in their order of occurrence. In the table the hypotheses

Table 3.1. Diagrammatic Plan of the Design

	Validation Group ½Adjusted	Validation Group ½Maladjusted	Cross Validation Group ½Adjusted	Cross Validation Group ½Maladjusted	Pilot Group
Step I PILOT ADMINISTRATION: items are rejected, revised and/or retained and new items are developed.					X*
Step II ADMINISTRATION OF SCALE to all groups to be used in the analysis of the data.	X		X		
Step III DEVELOPMENT OF VALIDITY SCALES leading to the elimination of some subjects from the sample.	X		X		
Step IV VALIDATION: determination of whether item discrimination is more productive according to configural formulation, straight agreement theory or neither.	X				
Step V CROSS VALIDATION: same procedure as Step IV with a new sample in order to cross validate the findings from the previous step.			X		
Step VI ESTIMATION OF RELIABILITY: computed eight times: 2 scoring systems by 2 validation and by 2 cross validation groups.	Configural X	Straight Agreement X	Configural X	Straight Agreement X	
Step VII DETERMINATION of whether the validated items differentiate significantly between the cross validation group maritally adjusted and maladjusted couples.			Configural X	Straight Agreement X	
Step VIII JUDGMENT of whether the personal construct theory is a more useful formulation than the straight agreement theory considering item productivity and reliability. Judgment concerning scale content.	X		X		

*X designates the group or groups involved in the various steps.

which are being put to test during the respective steps in the design as well as which groups are involved at each step are charted.

Step I refers to those operations conducted to prepare the items on an a priori basis so that they have the greatest chance of discriminating between maritally adjusted and maladjusted couples. Step II is the administration of the experimental scale to all of the groups which will provide the data for the analysis. Step III is the development of the Validity Scales Set T and F described under "Control of Extraneous Variables" in the present chapter (supra, p. 77).

Steps IV and V are the comparisons of the maritally adjusted and maladjusted groups in order to determine the validity of the items and of the scale. In Step IV the scores of the first halves of the maritally adjusted group and maladjusted group are compared on the experimental scale according to two different theories. In Step V the scores of the second halves of the maritally adjusted group and maladjusted group are compared according to the same two theories in order to cross validate the items.

The sixth step is the determination of reliability. It will be determined separately for each of the four groups in the sample twice:

1. Validation group: Maritally adjusted--configural scoring
2. Validation group: Maritally adjusted--straight agreement scoring
3. Validation group: Maritally maladjusted--configural scoring
4. Validation group: Maritally maladjusted--straight agreement scoring
5. Cross validation group: Maritally adjusted--configural scoring
6. Cross validation group: Maritally adjusted--straight agreement scoring

7. Cross validation group: Maritally maladjusted--configural scoring
8. Cross validation group: Maritally maladjusted--straight agreement scoring.

In Step VII the cross validation group maritally adjusted and maladjusted couples' scores on the validated items are compared in order to determine if the validated scale differentiates between a new sample of maritally adjusted and maladjusted couples.

Step VIII involves judgments regarding the configural scoring system, the straight agreement scoring system and the content of the scale. Judgments regarding the scoring systems are based on item productivity, validity and reliability. Judgments regarding the content of the scale are based upon the sufficiency of item productivity insuring systematic rather than chance discrimination in the spousal agreement correlates of marital adjustment.

The Hypotheses

Three null hypotheses are formulated with their respective alternates. Null Hypothesis I is stated in reference to the scoring system inferred from the personal construct formulation of behavior. Null Hypothesis II is stated in reference to items scored for spousal agreement on issues related to marriage regardless of the mates' agreement or disagreement on the importance of the items. Null Hypothesis III is stated in reference to the content of the scale.

Null Hypothesis I--Configural Scoring

Maritally adjusted couples agree no more than maritally maladjusted couples on the truth or falsity of issues perceived important by both mates.

Alternate I: Maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues perceived important by both mates.

Null Hypothesis II--Straight Agreement Scoring
Maritally adjusted couples agree no more than maritally maladjusted couples on the truth or falsity of issues regardless of the perceived importance of the issues.
Alternate II: Maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues regardless of the perceived importance of issues.

Null Hypothesis III--Content of the Scale
Items derived from the spousal agreement correlates do not discriminate between maritally adjusted and maladjusted couples.
Alternate III: Items derived from the spousal agreement correlates discriminate between maritally adjusted and maladjusted couples.

The Statistical Analysis

The basic statistic used in the experiment is the chi-square.[3] It is used to test the significance of the differences between maritally adjusted and maladjusted samples in the validation and cross validation groups for items scored in accordance with the personal construct formulation and the straight agreement approach.

The six response types of the Issues Scale are regrouped according to the two respective theories into contingency tables. The chi-square tests are conducted for each of the 140 items using both the configural and straight agreement scoring. All analyses were cross validated. It was decided that a $p < .10$ was necessary to consider items significant at the validation stage and cross validation stage. The leniency assigned to the significance level required to reject the null hypotheses is justified by two considerations:

1. The purpose of the study is to determine the relative merits of the two scoring systems derived from two different theories. Every opportunity should be afforded

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[3] H. M. Walker and J. Lev, Statistical Inference (New York: Holt, 1953), pp. 84-108.

for determining the differences in these scoring systems.

2. The replication in the design has the effect of insuring that predicted differences are reliable.

Items which are significant for both the validation and cross validation groups but contain a cell or cells with less than a theoretical expectancy of five are reanalyzed using the Fisher's Exact Probability Test.[4]

The t test[5] is used to determine whether or not the validated items differentiate significantly between the maritally adjusted and maladjusted subjects of the cross validation group.

In addition to the chi-square statistic the Analysis of Variance Method of Determining Reliability[6] is used. T scores and their respective probabilities[7] are used to determine to what point scores on the validity keys are random.

The statistical treatment of the validity keys warrant further comment. Items which are responded to in accordance with the characteristics of the "Set T" and "F" scales are separated into the respective validity scales. T scores are attributed to subjects in accordance with the number of validity key items they respond to in the statistically rare manner. Cut-off points are established for the scales according to the criteria (supra, p. 80) and subjects who score above the cut-off

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[4] Ibid.

[5] A. L. Edwards, Statistical Methods for the Behavioral Sciences (New York: Rinehart, 1956), pp. 111-3.

[6] C. J. Hoyt, "Test Reliability Estimated by the Analysis of Variance Method," Psychometrika VI (1941), pp. 267-87.

[7] A. L. Edwards, op. cit., pp. 246-77.

point on either the "Set T" or "F" scales are discarded from the sample. The T score necessary for elimination from the sample was purposefully made high in order to avoid a Type I statistical error due to the relatively small N.

Summary

The independent variables of the study are marital adjustment and marital maladjustment. The dependent variables are the consensus of mates' perceptions on the truth or falsity of issues, the consensus of mates in their strength of feelings about issues and the interaction of the above variables.

Two types of extraneous variables were discussed. The sociological factors were considered concomitant variables and should therefore vary with the degree of adjustment and maladjustment in marriage. Secondly, the psychological factors such as response bias were discussed and two validity scales are being constructed to rule out this source of extraneous variables in cases where it is flagrantly manifested.

The design of the study was reported diagrammatically and in terms of temporal occurence. From first to last, the following eight steps were charted:

Step I Pre-administration of scale

Step II Administration of experimental scale to main body of subjects

Step III Development of two validity scales

Step IV Validation of items

Step V Cross validation of items

Step VI Estimation of reliability

Step VII Validation of the experimental scale

Step VIII Judgments concerning two scoring systems.

Three null hypotheses and their alternates were stated. The first referred to the scoring system derived from the personal construct theory. The second null hypothesis referred to the scoring system derived from the straight agreement theory. The third referred to the content of the scale.

The statistical treatment of the data was discussed in terms of the various tests to be made during the operational steps of the design. Levels of significance required to reject the null hypotheses were stated in advance of the analysis of the results. A $p < .10$ was required at both the validation and cross validation stage of the study.

CHAPTER IV

METHODS AND PROCEDURES

In Chapter III the design for the study was detailed. The purpose of the present chapter is to describe the nature of the variables. First, the criterion and experimental instruments are described followed by an explanation of subject selection. The age, number of years married, vocations, education and sundry characteristics of the subjects are given followed by a description of instrument administration.

Instrumentation

Two instruments are discussed in the following section. The first is the criterion instrument which was employed in the selection of maritally adjusted subjects. The second instrument is the experimental scale--the Issues Scale. The development and structure of the Issues Scale are discussed.

Criterion Instrument

The Short Marital Adjustment Test (supra, p. 67) was the criterion instrument used to select maritally adjusted couples to participate in the current study. Marriages in which both mates earned a score of 100 or over on the criterion instrument were retained to comprise the maritally adjusted samples. Marriages in which one or both mates earned scores of less than 100 on the criterion instrument were not considered maritally adjusted and were deleted from the study.

The normative data on the Short Marital Adjustment Test suggested that 96 per cent of the maritally adjusted couples and 17 per cent of the

maritally maladjusted couples score on or above the cut-off score of 100. The risk of including 17 per cent maladjusted couples in the adjusted samples was justified according to two consideration.

1. All previous attempts to scale marital adjustment indicated that the upper end of the marital adjustment curve falls off sharply, suggesting a modal range of adjustment followed by relatively few idealized adjustments.

2. A number of previous studies have found that maritally maladjusted couples who respond to scales similar to maritally adjusted couples are maladjusted only in particular aspects of their marital life.

The mean and standard deviations of the criterion instrument scores for maritally adjusted couples in the validation and cross validation groups were computed. Respectively, the mean scores for men were 124 and 127, and the mean scores for women were 122 and 127. The standard deviation for men was 13.4 in the validation group and 11.8 in the cross validation group, and 12.7 and 11.3 for the women in these respective groups. An F ratio was computed for the largest and smallest variances of the four groups. The ratio was not large enough to suggest systematic variation in the mean scores of marital adjustment between either men and women or between validation and cross validation groups.

The Experimental Instrument

The "Issues Scale" is composed of 140 items subdivided into seven groups of 20 items. The seven subgroups of items were derived from the following seven spousal agreement correlates of marital adjustment: (1) handling finances, (2) demonstrations of affection, (3) intimate relations, (4) friends, (5) dealing with in-laws, (6) philosophy of life, and (7) recreation.

In past studies agreement of mates on the above areas was correlated with marital adjustment. In Appendix A a list of the original pool of Issue Scale items is classified according to the above areas of marriage.

Subjects were required to make two responses to each item. First they were asked to designate whether they believed the item to be always true, usually true, rarely true, or never true. Secondly they were asked to designate whether or not they felt strongly about the item. In Appendix A the actual instruction sheet for responding to the scale is duplicated.

The "Issues Scale" was administered to a sample of 15 couples from various socioeconomic groups in order to determine any lack of clarity and anomalies in the scale. The investigator read the items aloud to two of the pilot couples in order to observe their reactions to the statements. Several people listened to the items read in groups of two, i.e. items numbered 1 and 2, 2 and 3, 3 and 4, etc. in order to determine whether the ordering of the pairs provided a source of humor or confusion which might decrease the value of the items involved. Reoccurring comments from the pilot sample concerning item clarity, the effects of ordering, and the format of the scale were carefully evaluated and considered in the revision of the scale.

The next step in the preparation of the Issues Scale for the main body of subjects who participated in the study was to establish the age-grade level of every word used in the items and the instructions. Lorge and Thorndike[1] suggest that words occurring in popular print at

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[1] E. L. Thorndike and I. Lorge, The Teacher's Word Book of 30,000 Words (New York: Bureau of Publications, Teachers College, Columbia University, 1944).

the rate of from 10 to 100 per million are comprehendable to youngsters in the fifth or sixth grade or to people with a fifth or sixth grade education. Each of the words in the Issues Scale was checked against the list of words found in popular print at a rate of from 10 to 100 per million. An effort was made to replace any words in the scale occurring less frequently in popular print than 10 per million with words meeting this standard. With the exception of the words "sexual intercourse" which could not be replaced with suitable alternates, all of the words in the Issues Scale met the above criterion.

Selection of Subjects

In selecting subjects for a study of marital adjustment the following biasing factors must be considered:

1. Maritally maladjusted couples are usually unwilling to participate in research which delves into aspects of their life possibly illustrating their inadequacies and shortcomings. Attempts to attain mates from maladjusted marriages on a voluntary basis are often futile.

2. Marital research necessarily involves an investigation of private or personal characteristics of the mates.

3. The average socioeconomic characteristics of maritally adjusted couples are known to be different from maritally maladjusted couples. Therefore, attempts to match maritally adjusted and maladjusted couples on sociological variables becomes a search for statistically rare couples in either the maritally adjusted or maladjusted populations.

4. Both mates must volunteer or be persuaded to participate in a study of marriage.

In the current study the subjects were persuaded to participate by the investigator as well as a number of clergymen, social workers, and educators who helped obtain couples for the study.

No restrictions were placed upon socioeconomic characteristics of the subjects with the exception that both the mates were required to be no older than 55 years. No claim was made about the subjects being a random sample of a specified population. Instead, the groups were regarded as "chunks" from which hypothetical populations may be defined.

The Maritally Maladjusted Couples

The criteria of maladjustment in marriage were either that one or both mates were starting procedures for a divorce or one or both mates were diagnosed as having marital problems and were being counseled for the same by a professional social service agency.

Thirty-nine couples in which one or both mates were taking the preliminary legal steps leading to divorce were obtained from the Probation and Adjustment Divisions of the Detroit, Michigan Recorders Court. The Probation Division works with clientele who have broken one or more laws governing marriage such as non-support and incest. The clients are placed on a period of probation during which they are helped to readjust and make restitution for their behavior. The Adjustment Division is the initial office which hears complaints of one mate against the other regarding behavior which may be grounds for divorce.

As part of the routine office procedure, each new couple interviewed within a week at the Adjustment Division and within three months at the Probation Division was administered the Issues Scale. The administration of the scale was conducted by the current investigator for two-thirds of the maritally maladjusted couples. Test administration for the remaining

one-third of the couples was conducted by three caseworkers from the Probations Division who were trained in administering the test. Thirty-nine cases were obtained from the Detroit Recorders Court. One of the thirty-nine couples was not included in the analysis of the data because their T score on the "F Scale" extended beyond the established cut-off point.

Eight additional maritally maladjusted cases were obtained from the Catholic Social Serive of Lansing, Michigan. The caseworkers at this agency were instructed to administer the Issues Scale to clients where the diagnosis was clearly that of maladjustment in marriage.

The Maritally Adjusted Couples

The maritally adjusted couples were obtained primarily through the assistance of various clergymen. Two couples were persuaded to participate directly through the efforts of the investigator and one couple was obtained through the efforts of an educator. An effort was made to enlist the cooperation of ministers from varying Protestant sects. Two of the couples were Catholic, and three were Negro Methodists.

The various clergymen were instructed to select couples whom they believed to be maritally adjusted. Fifty-eight couples were obtained in all. Forty-seven of these couples qualified as maritally adjusted by scoring above the cut-off point on the Short Marital Adjustment Test. These forty-seven couples comprise the maritally adjusted samples and have all been retained for the analysis of the data.

The Validation and Cross Validation Groups

Half of the maritally adjusted and half of the maritally maladjusted couples were assigned to the validation group, and the remaining halves were assigned to the cross validation group. The assignment of the couples to validation or cross validation was conducted according to a table of random numbers.

The concomitant variables of marital adjustment: education, level of occupation, age of mates and years married were tabulated in order to describe the characteristics of the samples.

Number of years of education is reported in Tables 4.1 and 4.2. Maritally adjusted men and women in both the validation and cross validation groups had a higher number of mean years education than maritally maladjusted men and women. However, a computed F ratio for the maximal and minimal variances illustrated that differences among the eight groups were not significant. In Table 4.1 is reported the number of years of education for maritally adjusted and maladjusted men and women in the validation and cross validation groups.

Table 4.1. Number of Years Education for Maritally Adjusted and Maladjusted Men and Women in the Validation and Cross Validation Groups

Number of Years	Validation Group				Cross Validation Group			
	Adjusted		Maladjusted		Adjusted		Maladjusted	
	M	F	M	F	M	F	M	F
2-5	0	0	1	1	0	0	2	0
6-9	2	3	5	5	0	1	7	3
10-13*	14	15	12	12	17	18	13	19
14-17	5	5	3	2	6	4	1	1
18-21	2	0	0	0	1	1	0	0
Total	23	23	21	20	24	24	23	23
Mean	13	11.6	10.8	10.4	13.3	12.5	10.3	11.2
SD	2.9	3.2	1.7	2.5	2.0	2.0	2.8	1.8

* Part of the sample having 13 years education spent an additional year in secondary school while part obtained one year of a college or trade school education. See Table 4.2 for the frequency of subjects who attended trade school or college.

It was noteworthy that maritally adjusted subjects attended college more frequently while maritally maladjusted subjects attended trade school more frequently. A chi-square was computed for these two groups, and the difference in education is significant at a $p < .01$. There were no significant differences between men and women or between the validation and cross validation groups in the type of post high school education obtained. In Table 4.2 the frequency of maritally adjusted and maladjusted men and women in the validation and cross validation groups who attended trade school or college is reported.

Table 4.2. Frequency of Maritally Adjusted and Maladjusted Men and Women in the Validation and Cross Validation Groups Who Have Attended Trade School or College

	Validation Group				Cross Validation Group			
	Adjusted		Maladjusted		Adjusted		Maladjusted	
	M	F	M	F	M	F	M	F
Attended College	7	8	3	2	10	9	3	3
Attended Trade School	2	1	5	6	2	3	6	5
Total	9	9	8	8	12	12	9	8

The occupational level of the participating couples is recorded and classified according to the Dictionary of Occupational Titles Part IV[2] in Table 4.3. The maritally adjusted men's occupations tended to cluster around the professional, technical, managerial, sales, clerical and mechanical fields. The maritally maladjusted men's occupations tended to cluster around the mechanical and manual fields. Differences between maritally adjusted and maladjusted women were not marked. In both groups approximately two-thirds of the women were unemployed. Considering the

[2] Dictionary of Occupational Titles (Part IV) United States Government Printing Office; Washington, D.C., 1944.

entire occupational classification, there was a rough inverse relationship between occupational level and marital adjustment for the male subjects. This was not so for the female subjects. A chi-square was computed comparing men in both the validation and cross validation groups by dividing 0-x, 1-x and 2-x Dictionary of Occupational Titles (D.O.T.) classifications into a "high" and 3-x, 4-x and 6-x into a "low" classification. The occupations of maritally adjusted men were significantly higher than those of maritally maladjusted men at a $p < .005$ for the validation group and a $p < .001$ for the cross validation group.

Table 4.3. D.O.T. (Part IV) Occupational Classification of Maritally Adjusted and Maladjusted Men and Women in the Validation and Cross Validation Groups

D.O.T. Part IV	Validation Group				Cross Validation Group			
	Adjusted		Maladjusted		Adjusted		Maladjusted	
Classification	M	F	M	F	M	F	M	F
0-x	6	0	1	1	12	3	1	1
1-x	4	4	3	1	5	3	4	2
2-x	0	1	2	3	2	0	0	1
3-x	0	0	0	0	1	0	0	0
4-x	11	1	6	1	4	0	3	1
6-x	2	1	8	2	0	0	14	1
Unemployed	0	16	2	12	0	18	2	18
Unknown	0	0	0	2	0	0	0	0
Total	23	23	22	22	24	24	24	24

The ages of the subjects are reported in Table 4.4. The mean age for both maritally adjusted men and women was from three to seven years higher than for maritally maladjusted men and women. Although the maritally adjusted men and women's standard deviations were lower than the maritally maladjusted men and women's in the validation group, the

reverse was true for the cross validation group. The maritally adjusted subjects in the current study are older than the maritally maladjusted subjects although the F ratio was not significant at $p < .05$. However, the F ratio for the age of maritally adjusted vs. maladjusted females in the cross validation group is significant at $p < .01$.

Table 4.4. Ages of Maritally Adjusted and Maladjusted Men and Women in the Validation and Cross Validation Groups

Age in Years	Validation Group				Cross Validation Group			
	Adjusted		Maladjusted		Adjusted		Maladjusted	
	M	F	M	F	M	F	M	F
16-23	0	0	3	4	1	2	2	2
24-31	2	5	6	7	5	6	9	13
32-39	8	7	9	8	9	8	8	7
40-47	11	11	2	1	5	7	2	2
48-55	2	0	1	0	4	1	2	0
N	23	23	21	20	24	24	23	24
Mean	40	37	32	30	37	33	34	30
SD	5.8	5.8	7.1	6.3	8.5	10.3	6.8	6.3

Maritally maladjusted couples differed from maritally adjusted couples in mean number of years married more so than on any of the other concomitant variables reported. The number of years married for maritally adjusted and maladjusted couples in the validation and cross validation groups are reported in Table 4.5. In both validation and cross validation groups the maritally adjusted subjects were married longer than the maritally maladjusted subjects. The computed t tests for both groups were significant at a $p < .001$. However, the maritally adjusted couples were no more variable than the maritally maladjusted couples in their number of years of marriage (all F ratios $p < .05$).

Table 4.5. Number of Years Married for Maritally Adjusted and Maladjusted Couples of the Validation and Cross Validation Groups

Years Married	Validation Group		Cross Validation Group	
	Adjusted	Maladjusted	Adjusted	Maladjusted
1-5	1	10	4	12
6-10	4	6	5	4
11-15	6	5	5	5
16-20	9	1	5	2
21-25	2	0	5	1
N	23	22	24	24
Mean	15.0	6.8	13.0	8.0
SD	5.0	5.0	7.0	5.9

Thirteen per cent of the subjects who participated in the study were married more than once. Eleven of these subjects were men and thirteen were women. Although there was a tendency for more of these subjects to be maladjusted, the computed chi-square was $p < .10$ and not significant. The number of subjects married more than once and the tabulation of their sex and classification of adjustment is reported in Table 4.6.

Table 4.6. Number of Maritally Adjusted and Maladjusted Male and Female Subjects Married More than Once

Sex	Validation Group		Cross Validation Group		N
	Adjusted	Maladjusted	Adjusted	Maladjusted	
Males	3	5	1	2	11
Females	3	3	2	5	13
Totals	6	8	3	7	24

The Sample Characteristics

In the actual composition of the sample there were a number of socioeconomic characteristics which appeared to be correlates of marital adjustment. Maritally adjusted men and women seemed to have a greater number of years education than maritally maladjusted men and women. However, it was the type of education rather than the length which was significantly differentiated. Greater numbers of the maritally adjusted attended college while greater numbers of the maritally maladjusted attended trade school.

The adjusted men's occupations clustered around the professional, technical, managerial, sales, clerical and mechanical fields whereas the maladjusted men's occupations were almost entirely limited to the manual and mechanical fields.

The age of the participants was not significantly associated with adjustment or maladjustment in marriage with the exception of the females in the cross validation group. In this group there was greater variability among the maritally adjusted females than in the other groups.

The most striking characteristic of adjusted marriages was that they were older marriages. Since there was no restrictions placed upon the selection of couples in accordance with their length of marriage, the correlation between marital adjustment and length of marriage appeared to be a valid one. There were too few participants in the study who were married more than once to determine if remarriage is systematically related to adjustment in marriage.

In summary, the socioeconomic characteristics which were systematically related to adjustment in marriage were the type of post high school education obtained, the fields of work (for the men) and the number of years married.

Administration of the Instruments

In each case the husband and wife of a marriage were instructed to respond to the instruments without communication with one another. This condition was insured for the maritally maladjusted couples because they were supervised by either the investigator or a social worker trained in administering the instrument. Unfortunately, the same safeguard could not be instituted for the maritally adjusted couples who responded to the instruments at home in their leisure time. It is unlikely that the maritally adjusted couples failed to meet the requirement of non-communication because there would be little reason for them to believe that they might benefit either directly or indirectly through communicating with one another. All instruments were filled out anonymously, and the maritally adjusted couples returned their protocols in a plain, sealed, white envelope.

There was no time limit set for completion of the instruments nor were the couples promised any feedback on the results of the tests. The maritally maladjusted couples were administered only the Issues Scale, while the maritally adjusted couples were administered both the Issue Scale and the Short Marital Adjustment Test. They were instructed to fill out the Short Marital Adjustment Test first.

Summary

The Short Marital Adjustment Test was described as well as how it was used as a criteria instrument. The steps for preparing the experimental instrument were indicated followed by a section on the selection of subjects. First the nature of the maritally adjusted and maladjusted

subjects were listed followed by a discussion of the apportioning of subjects to the validation and cross validation groups. The number of years education, occupations, ages, number of years married, and second marriages were tabled for maritally adjusted and maladjusted subjects in the validation and cross validation groups. Obtaining a college as opposed to a trade school education, working in the professional, technical, managerial, sales and clerical fields as opposed to the mechanical and manual fields, and the number of years married were all positively associated with adjustment in marriage. There was no systematic relation between adjustment in marriage and number of years education or remarriage. Lastly, the conditions which were necessary for the administration of the instruments were explained.

CHAPTER V

ANALYSIS OF THE RESULTS

The first section of Chapter V is a description of the development of "Set T" and "F" scales for use in the present study. The validation and cross validation of the items and the validation of the scale with a new sample is reported. The various estimations of reliability for the alternate scoring systems of the scale for the samples are reported followed by a discussion on the attribution of scores to the experimental scale.

Development of the Set T and F Scales

As a preliminary step in the development of the validity scales, all of the validation group's responses to the items were tabulated into two sets of contingency tables. The first set was constructed to receive the tabulation of responses scored according to the personal construct theory, and the second set was constructed to receive the tabulation of responses scored according to the straight agreement theory.

The Set T Scale

Through observation, items which seemed highly controversial, i.e. were responded to by both maritally adjusted and maladjusted couples with almost equal probability in the direction of marital adjustment or maladjustment, were collected for the development of Set T Scale. The ideal items for Set T Scale would contain an equal number of subjects in each of the four cells of the contingency table.

A priorly, three criteria were established in order to select the

items for the Set T Scale: 1) the deviation between the maritally adjusted and maladjusted couples' responses had to be no greater than 20 per cent of the total responses made per item; 2) the distribution of scores in the cells had to deviate no more than 30 per cent from chance expectancies, and 3) the first two criteria had to be met by both the validation and cross validation groups.

The above criteria were met by three items scored according to the personal construct theory and six items scored according to the straight agreement formulation. Due to the small number of items meeting the criteria, the Set T Scale was discarded. It is highly possible that the lack of items meeting the criteria was in part due to the nature of the items. Each item was carefully constructed to differentiate between maritally adjusted and maladjusted couples. The small number of items in the original pool as well as the stringency of the criteria also may have limited the number of items meeting the criteria.

The F Scale

Items were collected for the F Scale by selecting those items in which one type of response was chosen by both maritally adjusted and maladjusted couples with alternate responses rarely chosen. The ideal F Scale item elicites near uniform responding regardless of the degree of adjustment in marriage.

The procedures for developing the F Scale have been discussed (supra, p. 102). Eight items scored according to the personal construct theory met the established criteria, while ten items scored according to the straight agreement formulation met the established criteria. In terms of the criteria the straight agreement items were closer to the

hypothetical ideal item when compared with the items scored according to the personal construct theory for the F Scale.

The ten items scored according to the straight agreement formulation were chosen to comprise the F Scale. These items and the direction of their respective statistically rare responses are listed in Table 5.1.

Table 5.1. The F Scale Items and Rare Responses

Item #	Item	Rare Response
13	A person must be responsible for what he does.	disagreement
26	A marriage is happy when the husband and wife love each other.	disagreement
31	Children should be included in a husband and wife's plans for a good time.	disagreement
45	Husbands and wives should spend their free time together.	disagreement
50	In-laws should be made to feel welcome in a couple's home.	disagreement
57	Your husband's or wife's parents are entitled to the same respect as your own parents.	disagreement
59	If a couple would have good times together, they would have fewer problems.	disagreement
81	The husband should be the breadwinner in the family.	disagreement
98	If people would stop worrying about how much better off their friends are, they would be happier.	disagreement
118	The spiritual part of life is important.	disagreement

The proportions of subjects who answered from one through seven items of the F Scale in the statistically rare manner were tabulated, and T scores were attributed to the accumulated proportions. The number of subjects responding to the F Scale items in the statistically rare manner, their respective accumulated proportions, and their T scores are reported in Table 5.2.

Table 5.2. Number, Accumulated Proportions, and T Scores of Rare Responses to the F Scale

Number of Rare Responses	Number of Subjects	Accumulated Proportion	T Score
0	61	.64893	54
1	21	.87233	61.5
2	9	.96807	68
3	2	.98934	73
4	0	.98934	73
5	0	.98934	73
6	0	.98934	73
7	1	.99997	80

The cut-off point for the F Scale was based upon the curve of the response distribution. Referring again to Table 5.2, it was noted that 98 per cent of the couples scored below a T score of 74. A natural break occurred in the curve of the distribution after a T score of 73 with one couple remaining at a T score of 80. The cut-off point was established at the T score of 74 which had the effect of dropping one couple who scored at 80 from the sample.

The reliability of the F Scale was computed for the entire group of 94 subjects according to Hoyt's Analysis of Variance Method.[1] This

[1] C. J. Hoyt, "Test Reliability Estimated by the Analysis of Variance Method," Psychometrika, VI (1941), pp. 267-87.

method of estimation was chosen because it yields results based upon the error variance and affords a computational procedure derived from the theoretical definition of reliability. The estimated reliability of the F Scale for the respective sample was .503. The respective computations and Analysis of Variance Table may be found in Appendix C.

The a priori assumption concerning the F Scale was that rarity of response when extreme was associated with misunderstanding of directions, reading difficulties and "faking bad". A recent study by Thweatt[2] studied the F Scale in an objective test battery of motivation which was administered to 4200 Michigan eleventh grade students. His conclusions were that underachievers select significantly more F items than overachievers, further investigation with the F Scale should be conducted before it is used to delete subjects from studies (particularly males), the F Scale represents a measure of social conformity, and it posseses the ability to tap an academic masculinity-feminity continuim. The implication for the current study is that it is possible that the one couple was deleted from the sample for spurious reasons.

Analysis of the Data

A restatement of the hypotheses and the findings from the validation and cross validation groups' data are found in this section of Chapter V. The findings are discussed in terms of the respective hypotheses.

Restatement of Hypotheses

Null Hypothesis I--Configural Scoring

Maritally adjusted couples agree no more than maritally

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[2] R. C. Thweatt, "The Development and Validation of An F Scale for An Objective Test Battery on Motivation" (Unpublished Ph.D. dissertation, Michigan State University, 1961), pp. 87-90.

maladjusted couples on the truth or falsity of issues perceived important by both mates.
Alternate I: Maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues perceived important by both mates.

Null Hypothesis II--Straight Agreement Scoring
Maritally adjusted couples agree no more than maritally maladjusted couples on the truth or falsity of issues regardless of the perceived importance of the issues.
Alternate II: Maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues regardless of the perceived importance of issues.

Null Hypothesis III--Content of the Scale
Items derived from the spousal agreement correlates do not discriminate between maritally adjusted and maladjusted couples.
Alternate III: Items derived from the spousal agreement correlates discriminate between maritally adjusted and maladjusted couples.

Validation Group Data

Each of the 130 items of the Issues Scale (140 items minus the ten F Scale items) were validated twice: first when scored according to the personal construct theory and secondly when scored according to the straight agreement formulation. The chi-square statistic was used to determine which items discriminated between maritally adjusted and maladjusted couples of the validation group at a predetermined $p < .10$. The modified version of the MISTIC Digital Computer Program K6M[3] was used to compute the chi-squares according to the formula

$$X^2 = \sum_{i=1}^{kl} \frac{(O_i - E_i - .5)^2}{E_i}$$

$\sum_{i=1}^{kl}$ = The sum of the blocks of matrices where K is the number of rows and 1 is the number of columns.

O_i = The number of observed frequencies.

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[3] MISTIC Digital Computer Program K6M available upon request: MISTIC Office; Fifth Floor, Electrical Engineering Building; Michigan State University; East Lansing, Michigan.

E_i = The number of expected frequencies.

The modified version of K6M is recommended when using small numbers.

Thirty-eight of the items scored according to the personal construct theory and forty-eight items scored according to the straight agreement formulation were significant at a $p < .10$. Since the hypotheses were directional and the tests of the hypotheses one-tailed, the directions given by McNemar[4] for determining one-tailed levels of significance from chi-square tables were followed, i.e., tabled chi-squares for $p < .10$ were found in the $p < .20$ column.

Cross Validation Group Data

The computational procedures and statistics for the cross validation analysis were the same as those for the validation. Thirty-nine of the items scored according to the personal construct theory were significant at the $p < .10$ while forty-one of the items scored according to the straight agreement formulation were significant at the $p < .10$. Again, item productivity was somewhat greater for the straight agreement scoring system.

Twenty of the straight agreement items and thirteen of the personal construct items were significant at $p < .10$ for both the validation and cross validation groups. Ten of the twenty straight agreement items contained theoretical chi-square cell expectancies of less than five in either the validation or cross validation tests of significance. Walker and Lev[5] state that chi-squares computed on contingency tables

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[4] Q. McNemar, Psychological Statistics (New York: Wiley, 1955) page 231.

[5] H. M. Walker and J. J. Lev, Statistical Inference (New York: Holt, 1953, 1953), page 104.

with any cells containing a theoretical expectancy of less than five may be spurious. They suggest that in order to rectify the above circumstances, the Exact Probability Test should be used for items with cells containing less than five expected cases.

In accordance with Walker and Lev's recommendations, the Exact Probability Test was computed for the ten items which contained cells with less than a five expectency. All of these items discriminated between maritally adjusted and maladjusted couples at a $p < .10$ or better. The steps through which items were eliminated is summarized in Table 5.3 while the computed chi-squares for all the items are reported in Appendix A. Only items which were significant in the validation and cross validation analyses were retained. The straight agreement scoring system was more productive in yielding items than the configural scoring system. Ten of the forty straight agreement tests of significance for retained items contained cells with less than five expected cases. None of the configural scored retained items had less than five expected cases per any of the cells.

Table 5.3. Number of Items Generated by the Configural Scoring and Straight Agreement Scoring for Validation and Cross Validation Groups

	Steps	Number of Items Yielded at $p < .10$	
		Configural Scoring	Straight Agreement Scoring
I	Validation	38	48
II	Cross validation	39	41
III	Significant items in validation and cross validation	13	20

The significant items were drawn from between four to six of the seven area correlates of marital adjustment from which they originated. The retained items for both scoring systems, the area correlates from which they originated, and the percentage of items from each area correlate are reported in Appendix B. It may be noted here that all of the configural scored items and eighteen out of twenty of the straight agreement items originated from the areas "Handling Finances", "Dealing with In-Laws", "Recreation", "Intimate Relations" and "Demonstrations of Affection". Two of the significant straight agreement items originated from the area of "Friends". No items, regardless of scoring system, originated from the area "Philosophy of Life".

Estimates of Reliability

The reliability of the Issues Scale was estimated for the maritally adjusted and maladjusted couples in the validation and cross validation groups for the two scoring systems by Hoyt's Analysis of Variance Technique.[6] In all, eight reliability coefficients were calculated. These are reported in Table 5.4. The computations and analysis of variance tables are found in Appendix C.

Table 5.4. The Hoyt's Analysis of Variance Estimate of Reliability for the Issues Scale

Couples	Scoring System	
	Straight Agreement	Configural
Validation:		
Maritally Adjusted	.559	.803
Maritally Maladjusted	.551	.866
Cross Validation		
Maritally Adjusted	.477	.905
Maritally Maladjusted	.779	.602

[6] C. J. Hoyt, op. cit., pp. 267-87.

It may be noted that with the exception of the cross validation maritally maladjusted sample each of the reliability coefficients for the configural scored items were markedly higher than the straight agreement scored items. The erratic reversal of the cross validation maritally maladjusted group coefficient may be attributed to a greater degree of error variance present in this group's responses. Further sampling would be necessary in order to determine if the reversal of the coefficient for the one maritally maladjusted sample was a sampling artifact.

Considering the marked increase in reliability of the configural scored items for three out of the four samples, the difference between the two scoring systems and their respective formulations appears to be a qualitative rather than quantitative one. Although the straight agreement scoring system was more productive in yielding items than the configural scoring system, the latter afforded a more reliable measure of adjustment in marriage for that population hypothetically derived from the samples used in the study. Items which mates agree upon and perceive as important were more reliable measures of adjustment in marriage than items which yielded only spousal agreement regardless of the mates' perceptions of the items.

Attribution of Scores to the Items of the Experimental Scale

The focus of the present thesis was to determine the value of developing a configural scoring system for content derived from theory in the area of marital adjustment. The investigator chose to limit scores inferred from both the personal construct and straight agreement theories to a simple "1"--"0" dichotomy; "1" if mates responded in the direction of marital adjustment and "0" if mates responded in the

direction of marital maladjustment. The frequency of positive or "1" scores for maritally adjusted and maladjusted subjects in the validation and cross validation groups were tallied. The means and standard deviations of the tallied scores are reported in Table 5.5. In order to test the difference between maritally adjusted and maladjusted mean scores t tests were computed. In all, eight tests were computed. All differences were significant at the $p < .001$. The standard deviations were relatively high for both maritally adjusted and maladjusted samples. The high standard deviations reflected the high variability in small samples which was the case in the current study.

Table 5.5. Mean Score and Standard Deviations of Maritally Adjusted and Maladjusted Validation and Cross Validation Groups on the Issues Scale

	Straight Agreement			Configural		
Samples	N	Mean	SD	N	Mean	SD
Validation						
Maritally Adjusted	22	18.00	2.24	22	7.79	3.97
Maritally Maladjusted	22	9.95	2.98	22	2.68	3.49
Cross Validation						
Maritally Adjusted	24	17.45	2.00	24	7.33	1.58
Maritally Maladjusted	24	11.29	2.36	24	2.63	2.48

Cross Validation of the Issues Scale

The cross validation group couples' scores on the validated forty-eight straight agreement items and thirty-eight configural items were tabulated. Forty-eight was the highest score that could be earned on the straight agreement items while thirty-eight was the highest score possible on the configural items. The mean scores and standard deviations for maritally adjusted and maladjusted couples on the valida-

ted straight agreement and configural items are reported in Table 5.6.

Table 5.6. Cross Validation Groups' Mean Scores and Standard Deviations on the Validated Items of the Issues Scale

	Validated Items					
	Straight Agreement			Configural		
Cross Validation Couples	N	Mean	SD	N	Mean	SD
Maritally Adjusted	24	37.42	4.04	24	15.96	8.17
Maritally Maladjusted	24	28.92	4.56	24	9.54	5.70

The t and F tests were computed in order to determine whether the validated Issues Scale items differentiated between maritally adjusted and maladjusted couples in a new sample. Cross validation group maritally adjusted couples earn significantly higher scores on the validated straight agreement scored items ($t = 6.83$; $df = 47$; $p < .0005$) and the validated configural items ($t = 3.11$; $df = 47$; $p < .005$) when compared with cross validation group maritally maladjusted couples. Cross validation maritally adjusted couples were significantly more variable than cross validation maritally maladjusted couples in their responding to the validated configural scored items ($F = 2.70$; $N_1 = 23$; $N_2 = 23$; $p < .05$). The computed F for cross validation couples' responding to validated straight agreement items was not sufficient to reject the null hypothesis of equivalent variance ($F = 1.28$; $N_1 = 23$; $N_2 = 23$; N.S.). In Tables 5.7 and 5.8 the overlap of the maritally adjusted and maladjusted couples' scores and the range of their scores are reported for the two respective scoring systems. The percentage of overlap for the straight agreement scored items was 77, and the percentage of overlap for the configural scored items was 85.

It may be noted that there is an overlap between maritally adjusted

Table 5.7. The Cross Validation Maritally Adjusted and Maladjusted Couples' Scores on the Validated Straight Agreement Scored Items

Straight Agreement Scoring Intervals	Cross Validation Couples	
	Maritally Adjusted	Maritally Maladjusted
21 - 23	1	4
24 - 26		4
27 - 29		5
30 - 32	2	4
33 - 35	3	5
36 - 38	7	2
39 - 41	8	
42 - 44	3	
N	24	24

Table 5.8. The Cross Validation Maritally Adjusted and Maladjusted Couples' Scores on the Validated Configural Scored Items

Configural Scoring Intervals	Cross Validation Couples	
	Maritally Adjusted	Maritally Maladjusted
0 - 2	1	2
3 - 5	3	3
6 - 8		8
9 - 11	3	2
12 - 14	4	3
15 - 17	2	4
18 - 20	4	2
21 - 23	2	
24 - 26	2	
27 - 29	2	
30 - 32	1	
N	24	24

and maladjusted couples' responding to both the straight agreement and configural scored items. The extensive range of maritally adjusted couples' scores in Table 5.8 seems to be a function of the configural scoring system. The range of scores was more limited for the same subjects on the straight agreement scored items. It seems that when couples' scores were penalized or enhanced according to their agreement or disagreement on the perceived importance of issues, a number of maritally adjusted couples responded to the scale like maritally maladjusted couples.

The reliability and validity of the two scoring systems which were the operational counterparts of the personal construct and straight agreement hypotheses were studied in order to confirm or reject the null hypotheses. The scoring systems were considered valid if they produced a sufficient number of items to assure that differences were not occurring by chance. The unwritten standards in scale development is that item retention should be about .333 at validation and .111 at cross validation. At the validation stage .292 personal construct items were retained, and .10 personal construct items were retained at the cross validation stage. At the validation stage .369 straight agreement items were retained and .153 at the cross validation stage. Since both scoring systems approximated the unwritten standards and were sufficient in number to reject the possibility of chance significance (1 to 5 significant items per a pool of 100), the content hypothesis was accepted.

The reliability for the configural items was markedly greater than for the straight agreement items. However, the straight agreement scoring system was more productive of items which differentiated significantly between maritally adjusted and maladjusted couples. The

straight agreement items afforded less of an overlap between maritally adjusted and maladjusted couples of a new sample (the cross validation group).

Rejection or acceptance of either the personal construct or straight agreement hypotheses must therefore be considered in terms of requirements necessary for acceptance or rejection within the context of a pilot study. Both the personal construct and straight agreement hypotheses were accepted with the following reservations. The personal construct hypothesis provided a reliable framework for the prediction of marital adjustment. However, it failed to generate a scoring system which clearly distinguished between maritally adjusted and maladjusted couples of the cross validation group. This inadequate differentiation may be a function of either a faulty criterion of adjustment in marriage or an imperfection in the refinement of the personal construct hypothesis.

The straight agreement hypothesis provided a framework for scaling adjustment in marriage with mediocre reliability. The relative merits of the two hypotheses may be compared by considering that the maximal validity of a scale can be no higher than the square of the maximal reliability of a scale. In this respect, the personal construct hypothesis when compared with the straight agreement hypothesis provided a qualitatively superior framework for the scaling of adjustment in marriage.

Summary

The results of the study were reported in Chapter V. The data relevant to the Set T and F scales were analyzed. The Set T scale was discarded due to the lack of items meeting the criteria for inclusion in

the scale. Eight of the straight agreement scored items and ten of the configural scored items met the criteria for inclusion in the F scale. The straight agreement items were chosen to comprise the F scale, and one couple was deleted from the sample because of their significantly high score on these items.

Items were analyzed for the validation and then the cross validation groups. At the validation stage forty-eight straight agreement scored items and thirty-eight configural scored items differentiated significantly between maritally adjusted and maladjusted couples. Twenty of the straight agreement items and thirteen of the personal construct items remained significant when cross validated.

The reliability of the Issues Scale was estimated for the maritally adjusted and maladjusted couples in the validation and cross validation groups for the two scoring systems by Hoyt's Analysis of Variance Technique. In all, eight reliability coefficients were calculated. With the exception of the cross validation maladjusted sample ($r = .602$), each of the reliability coefficients for the configural scored items ($r's = .905, .866, .803$) were markedly higher than the straight agreement scored items ($r's = .477, .511, .599, .799$).

Scores were attributed to the Issues Scale and t tests were computed in order to test for differences between the mean scores of cross validated maritally adjusted and maladjusted couples on the validated items of the Issues Scale. The differences between the means were significant at a $p < .0005$ for the straight agreement items and a $p < .005$ for the configural scored items. Cross validation group

maritally adjusted couples were significantly more variable than cross validation group maritally maladjusted couples in their responding to the configural scored validation items ($p < .05$).

CHAPTER VI

SUMMARY AND CONCLUSIONS

The first part of Chapter VI consists of a summary of the problem, design, methods and procedures, results, and limitations of the study. The conclusions of this pilot study are then stated followed by suggestions for future research.

Summary

The Problem

The increasing recognition of rising divorce rates as a social problem and the abundant evidence for the success or failure of marriage depending upon the personal relationship of the mates have converged to provide a problem area for study by the behavioral sciences. The study of marital success or failure is not new. However, studies anteceding 1950 have suffered from inapplicable instrumentation, faulty research design and meager theoretical foundations. Within the last ten years suitable instrumentation, appropriate research methodology and use of theory have increased the adequacy of research on success or failure in marriage. One barrier has remained sound--the problem of individual differences in marriage. What is the panacea for one marriage may be the ruination of another.

The purpose of the present thesis was to construct a scale of marital adjustment and to determine whether the inclusion of the variable of perceived importance of the items by the mates would increase the reliability and validity of marital scale construction. A personal

construct theory of behavior was employed in order to predict how the mates' perception of items would influence the measurement of their adjustment in marriage. It was hypothesized that the consequence, marital adjustment, was a function of the way the mates perceived each other and their marriage. A second purpose of the study was to determine whether or not spousal agreement areas correlated with marital adjustment would provide a suitable foundation for the derivation of scale content. It was predicted that the spousal agreement areas correlated with marital adjustment which the mates agreed upon and both perceived as important were reliable indicators of marital adjustment.

In order to determine whether the mates' perceived importances of issues warranted the consideration in the scaling of marital adjustment that was inferred from theory, two scoring systems were developed for the experimental scale. The first took cognizance of the agreement of mates on issues correlated with marriage while the second gave scoring weight only to those issues agreed upon and perceived important by the mates.

The Design

The independent variables of the study were adjustment and maladjustment in marriage. The former was determined by the mates' scores on the Locke-Wallace Short Marital Adjustment Test. The latter was determined by choosing mates who were starting procedures for divorce or receiving professional marital counseling for diagnosed marital difficulties.

The dependent variables of the study were agreement of mates on issues taken from areas known to be correlated with marital adjustment, the perceived importance of these issues, and the content of the scale. The Issues Scale, the operational counterpart of the dependent variables, was composed of 140 items selected from seven spousal agreement areas known to be correlated with marital adjustment. These areas were (1) dealing with in-laws, (2) intimate relations, (3) friends, (4) recreation, (5) philosophy of life, (6) handling finances, and (7) demonstrations of affection.

Two scoring systems were constructed for the scale: the first measured mates' agreements on the items and was labeled straight agreement scoring; the second scoring system was configural and measured the mates' consensus on the perceived importance of the items as well as their agreement on these items. For the latter, six differing combinations of agreement in perceptions of items and agreement on items were tallied although these tallies were condensed into "1"--"0" dichotomies which were inferred from the personal construct and straight agreement formulations.

In order to control extraneous variance, two validity scales were proposed. The first, an F Scale, was constructed by compiling those items which elicited responses almost unanimously in one direction regardless of the degree of adjustment in marriage. The second, a T Scale, was constructed by compiling those items which were controversial for the subjects regardless of the degree of adjustment in marriage. Accordingly, couples who would respond to the compiled items in a statistically significant rare manner were to be rejected from the sample in order to reduce error variance. Previous research on validity

scales assumed that F type items measured misunderstanding of the scale, reading comprehension difficulties and confused thought processes. It was suggested that the Set T type items measured rigid response bias attributable to resistance, boredom, inflexibility, unconcern and other unknown variables.

There were eight temporal steps in the design of the study. The first involved the preliminary administration of the Issues Scale in order to refine the instrument. Following, the Issues Scale was administered to all the groups to be used in the analysis of the data, and the criterion instrument was administered to the maritally adjusted sample. The validity scales were analyzed followed by the validation analysis of the data. Cross validation followed in order to replicate the validation results. Reliability of the Issues Scale was estimated for each of the subgroups. The scale was then cross validated by analyzing cross validation group's scores on the validated items. The final step was a judgmental rather than statistical one. It involved the determination of whether the configural or straight agreement scoring should be used to determine marital adjustment and whether or not item productivity was sufficient to insure that the derivation of the reliable and valid items was not due to chance. The first two hypotheses referred to the alternate scoring systems as follows: (1) maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues perceived important by both mates; (2) maritally adjusted couples agree more than maritally maladjusted couples on the truth or falsity of issues regardless of the perceived importance of issues. The third hypothesis referred to the content of the scale. It was predicted that item productivity was

sufficient to insure that reliable and valid items were not derived spuriously from the spousal agreement areas of marital adjustment.

The chi-square statistic was used to test the significance of items in discriminating between maritally adjusted and maladjusted couples. When chi-square expectancies were below 5, the Fisher Exact Probability Test was used in addition to the chi-square statistic. T Scores were used in the compilation of validity scale scores, and Hoyt's Analysis of Variance Method of estimating reliability was used.

Methods and Procedures

The Locke-Wallace Marital Adjustment Test was used as the criterion instrument for selecting maritally adjusted couples because of its inclusion of maritally maladjusted couples in the standardization, its reliability and validity, and its brevity. In the standardization of the criterion instrument 96 per cent of the maritally adjusted group scored above 100 and 17 per cent of the maritally maladjusted group scored above 100. In the current study mates chosen for the maritally adjusted group had to earn a score of 100 or more on the criterion instrument.

The development of the experimental scale involved the inventing of items to represent seven area correlates of marital adjustment, pilot administration of the original pool of items and revisions, determination of the effects of item order and age-grade level of words used in the scale.

Subjects were persuaded to participate in the study by various social workers, clergymen and one educator who cooperated in enlisting subjects. Cognizance was given to the hostility maritally maladjusted couples might feel in participating in such a study, to the private

nature of the research, and to the known difference in socioeconomic characteristics for maritally adjusted and maladjusted couples. No attempt was made to restrict subject selection on any variable other than adjustment and maladjustment in marriage. The sample was regarded as the basis from which hypothetical populations were inferred for generalization purposes.

Thirty-nine of the maritally maladjusted subjects comprise the entire group of mates filing for divorce or on probation pending divorce at the Detroit Recorder Court over a designated period of time. The remaining eight maritally maladjusted couples were in the beginning stages of marital counseling at the Catholic Social Service Agency; Lansing, Michigan. One of the couples from the Detroit Recorders Court was rejected from the sample because of their significantly high score on the F scale.

Fifty-eight couples were persuaded by their clergymen and one educator to participate in the study. The Locke-Wallace Marital Adjustment Scale was administered to these couples, and forty-seven of them exceeded the pre-set score of 100.

Half of the maritally adjusted couples and half of the maritally maladjusted couples were assigned to the validation group with the aid of a table of random numbers. The remaining halves were assigned to the cross validation group.

Maritally adjusted men and women attended school longer than maritally maladjusted men and women; however, the differences between the means was not significant. It was worth noting that a significantly greater number of maritally adjusted men obtained college rather than trade school training when compared with maritally maladjusted men.

There was a significant inverse relationship between the level of Dictionary of Occupational Titles (Part IV) Classification for the men and their respective level of adjustment in marriage. Two-thirds of the women were unemployed. For those who were employed, there was a trend in the relationship between marital adjustment and occupational classification similar to the relationship for men.

The mean number of years married for maritally adjusted couples was significantly higher when compared with maritally maladjusted couples. Thirteen per cent of the subjects were married more than once. There were no clear-cut indications that being married more than once was related to either marital adjustment or maladjustment for the subjects in a systematic manner.

The instruments of the study were administered to the maritally maladjusted subjects by the Investigator or social workers trained in the administration of the scale. Maritally adjusted couples filled out the scales at their own homes in their leisure time. They were instructed not to talk with their mates until the scales were returned in a provided plain, white, sealed envelope.

Results

The analysis of the Set T and F Scales were given first priority in order to determine if any of the couples were to be eliminated from the major analyses of the study. Three criteria were developed for the selection of both validity scale items: (1) the deviation between the maritally adjusted and maladjusted couples reponses had to be no greater than 20 per cent of the responses made per item, (2) the distribution of scores in the cells had to deviate no more than 30 per cent from chance expectancies in the direction of marital adjustment or maladjustment,

and (3) the first two criteria had to be cross validated as well as validated.

An insufficient number of items (3) met the criteria for the Set T Scale regardless of scoring system. Eight configural items and ten straight agreement items met the criteria for the F Scale. The straight agreement scored F Scale was retained, and T scores were computed for the samples' responses to the scale. One maritally maladjusted couple was rejected at this point who earned a T score of 80. There were 98.9 per cent of the subjects who earned T scores no higher than 73. The T score 74 was established as the cut-off point for rejecting couples from further analyses. The reliability of the F Scale for the total sample of 93 subjects was .503.

In the next stage of analysis the validation group data was inspected for item productivity. Thirty-eight of the items scored according to the personal construct theory and forty-eight of the items scored according to the straight agreement theory were significant. When the same items were cross validated, thirteen of the personal construct items and twenty of the straight agreement items remained significant. Ten of the twenty straight agreement items required further statistical analysis (Fisher Exact Probability Test), and these ten remained significant.

The significant items from either scoring system originated from all of the area correlates of marital adjustment used in the study with the exception of "Philosophy of Life". The areas "In-Laws", "Intimate Relations", and "Handling Finances" were the most productive of items.

The Analysis of Variance Reliability Coefficients ranged from .599 to .779 for the straight agreement items and from .602 to .803 for the

personal construct items. The personal construct items were more reliable for three of the four groups.

The Issues Scale was cross validated by using the cross validation group as a new sample to which the validated items were administered. The mean scores for the cross validation maritally adjusted and maladjusted couples were computed. *t* tests were used to test the significance of the means, and *F* tests were used to test the significance of the variance. The maritally adjusted couples earned significantly higher scores than the maritally maladjusted couples on both the straight agreement and configural scored scales. The maritally adjusted couples' scores were significantly more variable than the maritally maladjusted couples' in their responding to the configural scored scale.

In summary, the straight agreement scoring system produced more items while the personal construct scoring system produced a fewer number of more reliable items. Although both straight agreement and personal construct formulations afforded a valid measure of adjustment in marriage, the latter provided a scale which was somewhat qualitatively superior to the former. The configural hypothesis, which referred to the perceived importance of the items to the mates and the straight agreement hypothesis which referred to the agreement of mates on the items regardless of their perceptions were both accepted with reservations. The content hypothesis was accepted since there was a sufficient number of reliable and valid items generated from the spousal agreement correlates of marital adjustment to insure that the items were not derived spuriously.

Limitations of the Study

The major limitations of the study were threefold: the small number of subjects engaged in the study, the relatively gross scoring system, and the insufficient number of items developed for the original pool.

The restricted number of subjects engaged in the study tended to decrease the number of items which were found to be significant. The chi-square curve is dependent upon the number of subjects in the sample, and it is possible that if the analyses were carried out for larger groups, there would have been a greater number of items which remained significant through out validation and cross validation analyses. The probability of lesser items remaining significant with larger groups is rare because of conservatism in the chi-square model involving a relatively few number of cases.

A second limitation was attributable to the base of from 23 to 24 couples per group. A larger sample would have offered a larger and more easily definable base for generalization of the results to hypothetical populations.

The relatively gross scoring systems for the scale tended to hide interaction within the "1"--"0" dichotomies. The responses were originally classified into one of six classifications. These classifications resembled a continuim in which mates' agreement on truth and mates' strong agreement on importance was the high point. Common sense might suggest that the opposite of the above configuration, mates' disagreement on truth and strong disagreement on strength of feelings would represent the other end of the continuim. However, theories of marital adjustment have not been specific enough to provide a basis for

weighting varying responses along a continuim.

The 140 item starting pool, in interaction with the relatively small sample, did not yield a sufficient number of items to systematically sample the composition of marital adjustment. The interaction between the original number of items and the size of the sample and their effect upon item productivity was difficult to disentangle. A measure of safety would be afforded if both the original pool of items as well as the size of the sample were doubled.

Minor limitations of the study included the failure of the validity scales to function in the assumed manner and the lack of homogenity of the sample. It must be recognized that the greater frequency of marital maladjustment among lower socioeconomic groups tends to influence definitions of marital adjustment so that they are useable for studying couples from these strata. The question of whether or not marital adjustment entails different characteristics among the various socio-economic groups has yet to be determined empirically.

Conclusions

The purpose of the present study was to construct a marital adjustment scale from a conceptual framework of mate's agreement with content derived from spousal agreement correlates of marital adjustment. Two scoring systems were compared, one inferred from the agreement of mates on issues correlated with marital adjustment and the second inferred from a theory of behavior which keynotes the mates' consensus on the perceptual importance of issues correlated with marital adjustment.

It was concluded:

1. For a hypothetical population inferred from sampling a wide range of socioeconomic groups, consensus of mates on issues and their perceived importance provided a framework for reliable and valid scaling of marital adjustment.

2. Mates' consensus on issues regardless of their perceived importance afforded a framework for scaling marital adjustment of mediocre reliability.

3. The traditional interpretation of compatability in marriage as a function of spousal agreement in certain well defined areas is a misleading framework fostering only partial scaling of marital adjustment. The traditional framework warrants alteration. Compatability in marriage is a function of spousal agreement in the areas of "Recreation", "Intimate Relations", "Dealing with In-Laws", "Handling Finances", and "Friends" and the mates' perceived importance of these areas.

4. When marital adjustment was construed as spousal agreement on issues and their perceived importance, 69.2 per cent of the items were drawn from the areas "Recreation" and "Intimate Relations", 30.6 per cent from the areas "Dealing with In-Laws", "Handling Finances" and "Friends". No items were drawn from the area "Philosophy of Life". Since the items were not derived factorially, caution should be used in interpreting the item productivity of areas based on the percentages in the current study.

Suggestions for Future Research

Scaling marital adjustment through the use of statistical methods and instrumentation typical of objective personality inventories appears to be a fruitful approach. However, the complexity of the area to be researched necessitates the inclusion of the following safeguards. The amount of items developed for an original pool should be inversely proportionate to the size of the sample. In order to develop scaling methods of marital adjustment beyond the exploratory stage, the size of the sample should be sufficiently large to provide representation from various socioeconomic groupings. Another reason for increasing the sample over and above the amount acceptable for instruments scaling individuals is that couple interaction tends to increase the amount of variability found in a given sample, other things being equal.

If validity keys are to be included in scales of marital adjustment, their empirical value needs to be determined. There is little empirical evidence that validity scales measure what they are purported to measure for individuals and no evidence of this kind for couples. If empirical validity is established for such a scale, it is recommended that items be chosen especially for the validity scale rather than using the discarded items from the original pool. Again, the greater variability stemming from couple interaction tends to blur the distinctiveness of items discriminating between marital adjustment and maladjustment and items discriminating between faking and sincere responding.

Factor analysis of items measuring mates' perceptions is another research project of value. It not only would cut down on the number of overlapping items but would also aid in the diagnosis of the areas

perceived by the mates as contributory to marital adjustment relative to current cultural values.

Another area which has clouded many attempts to scale marital adjustment but has never been scrutinized is the accomodation factor in marriage. In simplest terms the accomodation factor is the label given to the response of a mate when he or she responds in a manner which is believed to be favored by the spouse. The accomodation takes place not out of conviction but out of adjustment to one another. It is usually more prevalent among women than men and always has been correlated with adjustment in marriage.

The most severe lack in scaling marital adjustment is the absense of systematized theory from which complex scoring systems could be developed which would be commensurate with the complexity of the human relationship to be researched. In the present study there were eight response combinations possible, although only two of these combinations could be inferred clearly from theory. If systematized theory on marital adjustment is not forthcoming, the researcher in the field may be forced to work backwards, i.e., develop scoring systems, study the marriages they apply to, and make post hoc generalizations for the use of future investigators.

Considering the preceding suggestions, further research on marital scale development should involve a large starting pool of items, stratified sampling from a wide range of socioeconomic groups (500 to 1,000 couples), cognizance of the accomodation factor in marital adjustment and factorially derived scoring categories. The validity scales would require empirical validation, and a substantial amount of characterizing data should be collected on the couples.

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APPENDIX A

I. Instruction Sheets for Responding to the Issues Scale

II. Items of the Issues Scale Classified According to their Area of Origin

A. Computed Chi Square for Each Item

1. Validation computation - configural scoring

2. Validation computation - straight agreement scoring

3. Cross validation computation - configural scoring

4. Cross validation computation - straight agreement scoring

I. Instruction Sheets for Responding to the Issues Scale

Dear Husband or Wife:

You are being asked to fill out the attached scale in order to help us better understand difficulties in marriage. Luckily, we do not have to ask you questions about your own marriage which might offend you. However, we request that you answer the attached scale the way you really feel about the issues.

You may feel assured that after you have returned the scale there will be no attempt to connect your name with the answers. Each test is numbered so that we may find out which scales have been returned and which ones have not been returned.

If you are living together, please do not talk about your answers with your husband or wife until you both have returned the scales.

The 30 to 40 minutes you spend filling out the scale will help us to serve you better by understanding more fully the problems of marriage.

Thanking you in advance for your consideration.

Sincerely yours,

Arnold S. Carson

Arnold S. Carson

(Research coordinator)

TEST NUMBER _____. BIRTHDATE _____. SEX _____.
month day year M or F

OCCUPATION _____. NUMBER OF YEARS MARRIED _____.

NUMBER OF CHILDREN LIVING WITH YOU _____. IS THIS YOUR FIRST MARRIAGE _____.
yes or no

NUMBER OF YEARS SCHOOLING _____. HAVE YOU ATTENDED COLLEGE _____.
yes or no

HAVE YOU ATTENDED TRADE SCHOOL _____.
yes or no

"THE ISSUES SCALE"

How to answer:

EACH STATEMENT MUST BE ANSWERED TWICE

(1) Read each statement and decide how true it is. Is it always true, usually true, rarely true or never true? Put a heavy mark with your pencil between the lines under the one you choose.

(2) Then decide if you feel strongly about the statement. If you do, put a heavy mark with your pencil between the lines under the "YES" column. If you do not, put a heavy black mark between the lines under the "NO" column.

Example:	How true is the statement?				Feel Strongly?	
	ALWAYS	USUALLY	RARELY	NEVER	YES	NO
(a) "Children should be spanked when bad."				■	■	

(The person who answered this question never thinks the statement is true so he put a mark between the lines under NEVER, and he feels strongly about the statement so he put a mark between the lines under YES).

TURN THE PAGE AND BEGIN WORK ACCORDING TO THE INSTRUCTIONS. THERE IS NO TIME LIMIT.

II. Items of the Issues Scale Classified According to their Area of Origin

A. Computed Chi-Square for Each Item

1. Validation computation - configural scoring
2. Validation computation - straight agreement scoring (henceforth called S.A.)
3. Cross Validation - configural scoring
4. Cross Validation - S.A. scoring

Area and Item Number	Items	Chi-Square Computation: Validation Configural	Validation S.A.	Cross Validation Configural	Cross Validation S.A.
In-Laws	1. Arguing with in-laws is childish.	1.81[a]	6.71[b]	0.76	5.44[a]
	8. When in-laws give a couple money, they should have some say in the couple's plans.	1.80[a]	3.86[a]	0.03	0.18
	15. It is natural to dislike a mother-in-law.	6.44[a]	4.99[a]	5.44[a]	4.76[b]
	22. The secret of dealing with in-laws is to watch what you do and say.	0.18	0.01	1.11	0.02
	29. In-laws are the nicest when they don't give advice.	0.18	0.05	1.46	1.55
	36. A person can feel closer to his or her in-laws than his own parents.	0.00	0.44	0.48	0.48
	43. In-laws try to run a couple's life.	0.12	6.47[a]	1.61	6.08[b]
	64. In-laws are a problem to unhappily married couples.	0.00	2.35[a]	0.15	0.80
	71. A marriage is in for trouble if a husband or wife is very close to his or her parents.	2.17[a]	1.14	0.00	1.46
	78. In-laws cause more marriages to break up than the couples themselves.	0.05	0.18	7.29[a]	12.93[a]
	85. The best way to handle in-laws is to agree with them and then do what you want to do.	0.06	0.04	0.00	2.10[a]
	92. It is handy to live near your in-laws.	5.56[a]	2.24[a]	0.18	1.14
	99. It is wise not to encourage visits by in-laws.	5.14[a]	9.59[a]	11.21[a]	8.67[b]
	106. When you can't reason with in-laws, you can ignore them.	5.62	0.09	3.06	1.98[a]
	113. A person's family should not be an issue in deciding whether to marry him or her.	0.02	0.08	0.00	0.00
	120. There is truth in the saying "You marry your in-laws".	0.48	0.44	0.43	0.13

[a] Significant Chi-Square ($p < .10$). [b] Significant Chi-Square and Exact Probability ($p < .10$).

Area and Item Number	Items	Chi-Square Computation			
		Validation		Cross Validation	
		Configural	S.A.	Configural	S.A.
In-laws	127. In-laws have a couple's best interest at heart.	0.63	1.21	0.78	10.35[a]
	134. Mother-in-laws should be told off when they are being busy-bodies.	0.01	1.81[a]	0.00	2.28[a]
Intimate Relations	2. Sex is made too important in this day and age.	1.36	1.88[a]	1.94[a]	0.02
	9. Having sexual intercourse can be a bother.	0.68	7.84[b]	3.16[a]	5.27[b]
	16. Going for long periods without sexual intercourse is normal.	1.65[a]	3.17[a]	0.51	0.31
	23. Sexual intercourse is pleasing only when it satisfies both mates.	0.37	0.15	6.86[a]	0.90
	30. Women should tell their husbands how they feel about sex.	0.02	2.79[a]	0.39	0.52
	37. Women care less about being sexually attractive after they are married.	0.84	0.73	0.15	11.04[a]
	44. Being able to get along sexually is important for a happy marriage.	1.17	5.12[a]	0.73	0.62
	51. There is only one right way to have sexual intercourse.	0.09	0.13	0.55	0.25
	58. A person's sex life should not be talked about.	4.04[a]	2.78[a]	0.10	0.10
	65. Sex play is silly for married couples.	14.57[a]	12.68[a]	6.17[a]	0.26
	72. Women are unhappy with the way sex is practiced today.	0.02	0.32	0.08	2.25[a]
	79. Sexual intercourse should not be practiced outside of marriage.	4.22[a]	0.45	6.94[a]	0.00
	86. Only a husband should make passes leading to sexual intercourse.	0.08	0.03	2.27[a]	3.05[a]
	93. Men should be given more sexual freedom than women.	4.99[a]	0.79	4.33[a]	4.79[a]
	100. There's too much fuss over sex today.	0.04	0.00	0.57	0.09
	107. Sexual intercourse should be more fun than it is.	0.01	2.72[b]	0.00	6.26[a]
	114. When people are married, any kind of sex act is O.K.	0.10	0.56	0.10	0.09
	121. Sex is dirty.	6.01[a]	2.79[a]	4.11[a]	1.42
	128. It takes more sex to satisfy men than women.	0.88	6.47[a]	0.10	0.34
	135. The reason for sex is to have children.	3.22[a]	2.96[b]	1.06	3.16[a]

Area and Item Number	Items	Chi-Square Computation Validation Configural	Validation S.A.	Cross Validation Configural	Cross Validation S.A.
Recreation	3. Watching television is one of the best ways to have a good time.	1.35	0.01	1.19	0.01
	10. Couples should take vacations every year.	1.37	4.40[b]	0.00	1.71[b]
	17. Husbands think spare time is only for their own enjoyment.	5.72[a]	11.55[a]	0.01	2.59[a]
	24. It's hard to have a good time when you are married.	3.41[a]	1.64	9.11[a]	6.19[a]
	38. Without having fun a marriage is bound to fall apart.	0.53	2.01[a]	0.19	0.03
	52. What a woman considers fun is not fun for a man.	0.20	3.06[a]	0.00	6.24[a]
	66. Husbands and wives should take separate vacations.	4.04[a]	5.07[a]	5.65[a]	0.01
	73. People would be more relaxed if they would take a drink of liquor.	2.28[a]	1.39	3.95[a]	0.17
	80. It's harder to have a good time after marriage.	2.84[a]	10.68[a]	2.70[a]	3.95[a]
	87. Men go fishing or hunting to get away from home.	1.81[a]	5.76[a]	0.19	1.35
	94. Playing cards is fun.	0.03	0.00	0.03	1.51
	101. A good time means getting away from the children.	9.77[a]	11.59[b]	5.35[a]	3.78[b]
	108. Marriage restricts a couple to the point where there is little time for fun.	3.87[a]	11.46[a]	2.78[a]	2.34[a]
	115. Husbands and wives find it hard to talk about things during their free time.	5.25[a]	14.71[a]	1.55	8.17[a]
	122. One should get away from home to relax.	1.27	7.32[a]	0.01	0.67
	129. Dancing is fun.	1.81	0.08	4.33	0.19
	136. A husband or wife would be better off if they could spend their spare time away from each other.	9.59[a]	6.34[a]	1.39	0.90
Handling Finances	4. Men are more practical buyers than women.	0.02	0.00	0.37	0.01
	11. It's a good idea to hold off paying bills as long as possible so money is handy.	9.83[a]	1.89[a]	5.42[a]	0.52
	18. Husbands should handle the money in the family.	0.01	0.19	0.01	0.00
	25. Husbands should feel free to spend family money on liquor.	2.68[a]	1.53	3.01[a]	0.19
	32. Handling money is the job of both the husband and wife.	0.10	0.48	1.72[a]	0.19

Area and Item Number	Items	Chi-Square Computation			
		Validation		Cross Validation	
		Configural	S.A.	Configural	S.A.
Handling Finances	39. Part of the family paycheck belongs to the wife and part to the husband.	0.01	0.56	1.11	0.02
	46. A lack of money can destroy love between a couple.	0.32	0.05	0.10	4.20[a]
	53. When a couple is broke, they should borrow money.	0.01	0.13	0.00	0.09
	60. Women should spend more on clothes than men.	0.06	0.25	2.19[a]	0.34
	67. It is useless to try to live on less money than you now make.	1.94[a]	0.10	0.01	6.35[a]
	74. Medical insurance is an essential expense in marriage.	0.81	0.05	0.04	0.10
	88. Wives spend more money than husbands.	0.04	0.00	0.19	1.03
	95. The best way to keep a marriage going is to have enough money to buy the things you want.	2.55[a]	4.99[a]	1.15	10.70[a]
	102. It is hard to earn a good living today.	0.06	0.01	1.61	0.00
	109. Both the husband and wife should handle the money.	0.10	0.48	0.28	0.00
	116. A husband should hold down two jobs when he can't make ends meet.	0.10	1.09	0.10	0.18
	123. Husbands and wives should agree about spending lots of money on something.	3.93[a]	0.90	0.02	0.01
	130. Living on a strict budget is worse than owing money.	1.49	2.78[a]	0.13	0.08
	137. It's upsetting the way the American wife has taken over the family money.	0.10	4.01[a]	0.00	2.86[a]
Demonstrations of Affection	5. Kissing is a woman's game.	0.07	2.62[a]	0.01	0.04
	12. A husband or wife or wants lots of affection is childish.	1.27	4.78[a]	0.36	2.78[b]
	19. Affection lead to sexual intercourse in marriage.	0.03	0.00	4.20[a]	0.00
	33. A person can feel affectionate without having sexual intercourse.	0.03	1.06	0.01	3.09[a]
	40. Affection in marriage is more important to men than women.	0.48	0.01	0.11	4.59[a]
	47. In marriage little gifts mean more than a thousand words.	1.12	0.08	3.23[a]	0.00
	54. There is not enough affection in marriage.	0.05	0.18	0.10	1.43
	61. It's silly to be affectionate when you don't feel like it.	0.29	0.40	0.66	0.55

Area and Item Number	Items	Chi-Square Computation			
		Validation		Cross Validation	
		Configural	S.A.	Configural	S.A.
Demonstrations of Affection	68. A loving date becomes a loving mate.	0.19	0.64	0.78	0.02
	75. Marriage is an agreement between two people to give the other person what he wants.	0.01	0.03	1.06	1.82[a]
	82. Kissing a husband or wife becomes a habit after awhile.	0.68	0.05	2.70[a]	0.62
	89. Women use affection more than men to get what they want.	0.01	0.01	0.00	1.39
	96. Giving gifts to your husband or wife is a good way to show your love.	0.54	0.06	9.31[a]	1.12
	103. People with cold personalities are bad risks for marriage.	0.02	0.07	0.74	0.07
	110. It takes more than love to hold a marriage together.	0.51	0.03	0.33	0.13
	117. Affection in marriage is more important to women than men.	0.04	0.01	0.32	1.92[a]
	124. A lack of affection in marriage bothers men more than women.	0.04	0.12	0.13	3.15[a]
	131. It's annoying when couples neck in public.	4.54[a]	0.42	0.06	0.04
	138. When a husband or wife is loving, the marriage is happy.	0.40	0.03	1.82[a]	0.00
Philosophy of Life	6. The family that prays together stays together.	0.67	2.62[a]	0.19	0.00
	20. People make their own happiness or sadness.	2.31[a]	4.04[a]	0.02	0.00
	27. The good things in life are earned by hard work.	0.01	0.25	0.03	0.00
	34. "I am my brother's keeper".	0.09	0.10	1.72[a]	0.08
	41. The important things in life cannot be bought.	0.23	0.18	6.75[a]	2.34[a]
	48. Humans would be animals if they did not know right from wrong.	0.09	0.88	1.34	0.00
	55. Your fate is already decided.	0.02	1.01	0.68	0.57
	62. All men are created equal.	2.90[a]	0.48	0.56	0.07
	69. People are born "good".	0.10	0.12	0.08	0.00
	76. The good life takes the middle road.	0.07	0.66	0.06	0.13
	83. Experience is the best teacher.	0.47	0.48	4.81[a]	0.01
	90. Society destroys all of us in some ways.	0.49	0.00	0.92	0.36
	97. Being an active member of a church is necessary for a good life.	0.18	0.00	3.24[a]	0.01

Area and Item Number	Items	Chi-Square Computation			
		Validation		Cross Validation	
		Configural	S.A.	Configural	S.A.
Philosophy of Life	104. It is good to find new ways to handle problems.	0.01	2.62[a]	6.98[a]	0.01
	111. People get pushed around in life.	0.73	0.14	0.13	4.08[a]
	125. True love is hard to find.	0.74	0.12	6.21[a]	0.09
	132. Having all you want can ruin you.	0.01	1.00	0.37	0.09
	139. It is hard to be happy without money.	0.01	0.00	0.00	0.37
Friends	7. It's annoying when a husband or wife talks about how well friends do.	0.01	0.18	0.01	0.51
	14. Aside from neighbors, a housewife finds it hard to make new friends.	0.37	1.78[a]	0.13	0.00
	21. A husband and wife should each have their own friends.	0.18	3.28[a]	1.68[a]	0.04
	28. A friend is someone who you can depend on.	0.50	0.00	0.02	1.51
	35. The best friends mind their own business.	0.85	0.28	3.01[a]	0.11
	42. Husband pick friends for different reasons than wives.	1.09	0.01	5.02[a]	0.84.
	49. A real friend is one who will take your side even against your husband or wife.	4.38[a]	1.51	1.49	0.90
	56. You can say anything to a real friend.	0.02	0.01	0.23	0.07
	63. Having close friends is more important to men than women.	2.68[a]	0.73	0.00	2.78[a]
	70. One or two good friends are more important than many friends.	10.38[a]	6.42[a]	1.64	0.10
	77. The husband should go out with the boys once a week.	0.18	0.02	0.06	1.92a
	84. You should be able to talk over your marriage problems with your friends.	0.02	0.04	0.00	0.09
	91. After marriage new friends are made through the husband.	0.01	0.05	0.08	0.05
	105. After marriage it is hard to find friends like that "old gang of mine".	0.22	4.53[a]	0.02	0.00
	112. A real friend will tell you when you are being childish.	0.18	1.96[a]	1.72[a]	1.49
	119. Friends are chosen because they can help you meet the right people.	8.01[a]	3.51[a]	0.10	0.67

Area and Item Number	Items	Chi-Square Computation			
		Validation		Cross Validation	
		Configural	S.A.	Configural	S.A.
Friends	126. Friends can be trouble makers for marriages.	0.33	4.69[a]	0.47	7.59[a]
	133. Friends are chosen because they can help you forget your problems.	1.80[a]	3.86[b]	0.13	1.91[a]
	140. A husband or wife should avoid having unmarried friends.	0.05	0.05	0.22	0.51

APPENDIX B

I. Validated and Cross Validated Items Classified According to Their Area of Origin

A. Percentage of Retained Items Per Area

APPENDIX B

Area	Nascent Scored: Per Cent	Nascent Scored: Item #	Nascent Scored: Item	Straight Agreement Scored: Per Cent	Straight Agreement Scored: Item #	Straight Agreement Scored: Item
Handling Finances	15.4	11	It's a good idea to hold off paying bills as long as possible so money is handy.	10	95	The best way to keep a marriage going is to have enough money to but the things you want.
		25	Husbands should feel free to spend family money on liquor.		137	It's upsetting the way the American wife has taken over the family money
In-Laws	7.7	15	It is natural to dislike a mother-in-law.	25	1	Arguing with in-laws is childish.
					15	It is natural to dislike a mother-in-law.
					43	In-laws try to run a couple's life.
					99	It is wise not to encourage visits by in-laws.
					134	Mother-in-laws should be told off when they are being busy-bodies.
Recreation	38.4	24	It's hard to have a good time when you are married.	35	10	Couples should take vacations every year.
		73	People would be more relaxed if they would take a drink of liquor.		17	Husbands think spare time is only for their own enjoyment.
		80	It's harder to have a good time after marriage.		52	What a woman considers fun is not fun for a man.
		101	A good time means getting away from the children.		80	It's harder to have a good time after marriage.
		108	Marriage restricts a couple to the point where there is little time for fun.		101	A good time means getting away from the children.
					108	Marriage restricts a couple to the point where there is little time for fun.
					115	Husbands and wives find it hard to talk about things during their free time.

Area	Nascent Scored: Per Cent	Item #	Item	Straight Agreement Scored: Per Cent	Item #	Item
Intimate Relations	30.8	65	Sex play is silly for married couples.	15	9	Having sexual intercourse can be a bother.
		79	Sexual intercourse should not be practiced outside of marriage.		107	Sexual intercourse should be more fun than it is.
		93	Men should be given more sexual freedom than women.		135	The reason for sex is to have children.
		121	Sex is dirty.			
Demonstrations of Affection	7.7	19	Affection leads to sexual intercourse in marriage.	5	12	A husband or wife who wants lots of affection is childish.
Friends				10	126	Friends can be trouble makers for marriages.
					133	Friends are chosen because they can help you forget your problems.

APPENDIX C

I. Analysis of Variance Tables and Computations

A. The "F" Scale - All Subjects

B. Configural Scored "Issues Scale"

1. Validation - Maritally adjusted group
2. Validation - Maritally maladjusted group
3. Cross Validation - Maritally adjusted group
4. Cross Validation - Maritally maladjusted group

C. Straight Agreement Scored "Issues Scale"

1. Validation - Maritally adjusted group
2. Validation - Maritally maladjusted group
3. Cross Validation - Maritally adjusted group
4. Cross Validation - Maritally maladjusted group

Analysis of Variance Tables and Computations

A. Analysis of Variance Estimate of Reliability of "F" Scale for All Subjects

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 93	SS_R = 9.47021	S^2_R = .10183
Items (Columns)	C-1 9	SS_C = 4.31915	S^2_C = .47991
Error	(R-1)(C-1) 837	SS_E = 42.3808	S^2_E = .05063
Total	RC-1 939	SS_T = 56.17021	

N items = 10
N individuals = 94

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .50276$$

B. Configural Scored "Issues Scale"

1. Analysis of Variance Estimate of Reliability of Configural Scored "Issues Scale" for Validation Maritally Adjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 22	SS_R = 20.608	S^2_R = .93673
Items (Columns)	C-1 12	SS_C = 2.622	S^2_C = .21850
Error	(R-1)(C-1) 264	SS_E = 48.609	S^2_E = .18413
Total	RC-1 298	SS_T = 71.839	

N items = 13
N individuals = 23

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .80343$$

Mean = 7.79
SD = 3.97

2. Analysis of Variance Estimate of Reliability of Configural Scored "Issues Scale" for Validation Maritally Adjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 21	SS_R = 16.983	S^2_R = .80871
Items (Columns)	C-1 12	SS_C = 2.511	S^2_C = .20925
Error	(R-1)(C-1) 252	SS_E = 27.3347	S^2_E = .10847
Total	RC-1 285	SS_T = 46.8287	

N items = 13
N individuals = 22

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .86587$$

Mean = 2.68
SD = 3.49

3. Analysis of Variance Estimate of Reliability of Configural Scored "Issues Scale" for Cross Validation Maritally Adjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 23	SS_R = 31.3987	S^2_R = 1.36516
Items (Columns)	C-1 12	SS_C = 9.2683	S^2_C = .77236
Error	(R-1)(C-1) 276	SS_E = 9.2683	S^2_E = .12946
Total	RC-1 311	SS_T = 76.3987	

N items = 13
N individuals = 24

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .90516$$

Mean = 7.33
SD = 1.58

4. Analysis of Variance Estimate of Reliability of Configural Scored "Issues Scale" for Cross Validation Maladjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 23	SS_R = 10.27885	S^2_R = .44691
Items (Columns)	C-1 12	SS_C = 3.57010	S^2_R = .29751
Error	(R-1)(C-1) 276	SS_E = 49.15105	S^2_E = .17808
Total	RC-1 311	SS_T = 63.00000	

N items = 13
N individuals = 24

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .6015$$

Mean = 2.63
SD = 2.48

C. Straight Agreement Scored "Issues Scale"

1. Analysis of Variance Estimate of Reliability of Straight Agreement Scored "Issues Scale" for Validation Maritally Adjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 22	SS_R = 5.1826	S^2_R = .235573
Items (Columns)	C-1 19	SS_C = 4.0522	S^2_C = .213237
Error	(R-1)(C-1) 418	SS_E = 39.478	S^2_E = .094445
Total	RC-1 459	SS_T = 49.1826	

N items = 20
N individuals = 23

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .5991$$

Mean = 16.83
SD = 5.72

2. Analysis of Variance Estimate of Reliability of Straight Agreement Scored "Issues Scale" for Validation Maritally Maladjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 21	SS_R = 9.74773	S^2_R = .464178
Items (Columns)	C-1 19	SS_C = 17.14773	S^2_C = .902512
Error	(R-1)(C-1) 399	SS_E = 83.10227	S^2_E = .208276
Total	RC-1 439	SS_T =109.99773	

N items = 20
N individuals = 22

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .5513$$

Mean = 9.95
SD = 2.98

3. Analysis of Variance Estimate of Reliability of Straight Agreement Scored "Issues Scale" for Cross Validation Maritally Adjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 23	SS_R = 4.498	S^2_R = .195565
Items (Columns)	C-1 19	SS_C = 4.0397	S^2_C = .212614
Error	(R-1)(C-1) 437	SS_E = 44.7103	S^2_E = .1023119
Total	RC-1 479	SS_T = 53.248	

N items = 20
N individuals = 24

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .476839$$

Mean = 17.45
SD = 2.00

4. Analysis of Variance Estimate of Reliability of Straight Agreement Scored "Issues Scale" for Cross Validation Maritally Maladjusted Group

Source of Variance	df	Sum of Squares	Variance
Individuals (Rows)	R-1 23	SS_R = 21.50266	S^2_R = .934898
Items (Columns)	C-1 19	SS_C = 20.07766	S^2_R =1.05671
Error	(R-1)(C-1) 437	SS_E = 90.37234	S^2_E = .206802
Total	RC-1 479	SS_T =131.9521	

N items = 20
N individuals = 24

Mean = 11.29
SD = 2.36

$$r_{tt} = \frac{S^2_R - S^2_E}{S^2_R} = .77879$$

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