CONSUMER LIFE STYLES AND THEIR RELATIONSHIP TO MARKET BEHAVIOR REGARDING HOUSEHOLD FURNITURE

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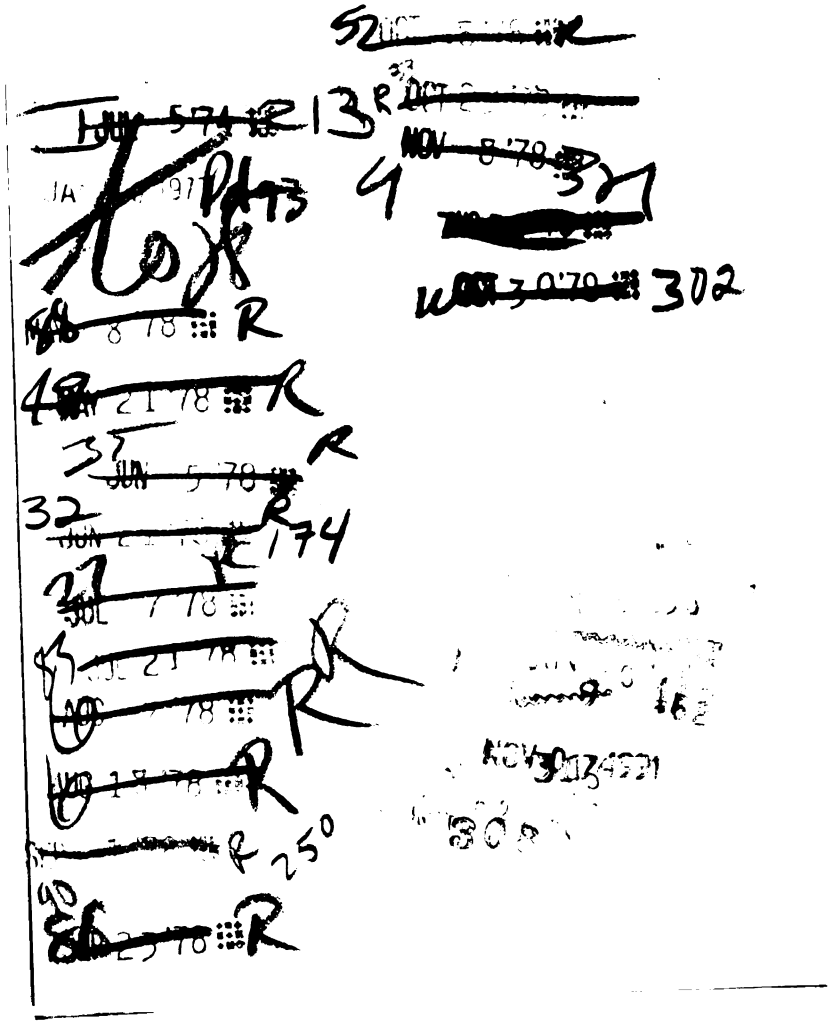

ABSTRACT

CONSUMER LIFE STYLES AND THEIR RELATIONSHIP
TO MARKET BEHAVIOR REGARDING
HOUSEHOLD FURNITURE

by

Walter Stephen Good

The household furniture industry in this country has historically been production oriented. Recent failures of the industry to increase its share of consumer disposable income has caused some concern among manufacturers and many realize that to improve their position they must change their orientation and pay considerably more attention to the people who buy their products.

This adoption of a more consumer oriented approach means that they must start communicating with consumers and gather information about their nature so that products and promotions can be directed more efficiently towards satisfying appropriate market segments. Such information can only be collected by means of sample surveys at the consumer level.

To date most of these market research studies have been of a traditional nature relating people's behavior to

certain demographic characteristics such as age, income, education, etc. It is essential that these basic facts be known, but they do not provide the whole answer. It is felt by the author that these variables may not be very good predictors of market behavior regarding household furniture. Perhaps more relevant information would be variables reflecting the individual's taste, attitudes and style of living to a greater degree.

To this end, the two major hypotheses investigated in this study are:

a) People live according to established behavior and attitude patterns which can be identified and measured.

b) These life-style patterns can be related to consumer behavior regarding household furniture.

The data for the study has been collected from a mail questionnaire which was submitted to 2000 women randomly selected from the Lansing, Michigan area telephone directory. By the final cut-off date, 555 questionnaires had been returned. Of this number, 520 or 26 percent of the total were usable and the analysis based on these respondents. The questionnaire, itself, consists of three different sections:

a) Six questions relating to standard demographic characteristics of the respondent and her family.

b) Five questions relating to the respondent's market behavior regarding household furniture.

c) Eighty questions relating to how the respondents live, spend their leisure time and attitudes and opinions on various subjects related to everyday living.

The life-style factors or variables are developed by subjecting the eighty variables in part C of the questionnaire to factor analysis. This procedure has identified a set of fifteen well-defined factors which cover a range of areas related to everyday family life.

To test the ability of these variables to predict consumer market behavior, an N-way multiple discriminant analysis has been used to separate groups of individuals who demonstrated certain behavior in regards to:

a) The type of retail outlet at which their last major furniture purchase was made.

b) The styling characteristics of this last major purchase.

In each case, three runs have been made using different types and combinations of variables to see which set gives the best separation among groups. These sets consist of:

a) The series of six demographic variables.

b) The set of fifteen life-style variables resulting from the factor analysis.

c) The combination of twenty-one variables.

For the first question relating to market behavior, the set of fifteen life-style variables gives the best separation between the groups. These factors are able to correctly classify over 63 percent of the respondents who made their last purchase at either a department store or a furniture store. This is opposed to 56 percent and 60 percent for the other two sets of variables.

For the question relating to the style of their particular purchase, respondents indicated whether the item can be classified as Colonial/Early American, Provincial, Contemporary or Spanish/Mediterranean. In this case, the combined set of twenty-one variables gives the best discrimination, correctly classifying almost 42 percent of the respondents. This is opposed to 33 percent for the demographic variables alone and 40 percent for the life-style variables alone.

From these results it can be concluded that:

a) Consumers do live according to certain patterns of behavior that can be measured and identified.

b) These behavior patterns or life-style factors have greater significance than the demographic variables in being able to predict market behavior from a practical standpoint.

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CHAPTER I

Introduction

A. Purpose:

The household furniture industry in this country has historically been production oriented. Furniture lines are produced by the manufacturer mainly to suit his factory and production line or on a hunch as to what dealers will buy (13). Recently the industry has been faced with the fact that its share of consumer disposable income has remained static over the past decade and this has caused some concern among manufacturers (29). They wish to provide the consumer with furniture that will make them put a larger share of growing disposable income into furniture purchases (13).

The most obvious approach to this problem is increased recognition of the importance of the consumer by the manufacturer or a consumer oriented approach to the marketing of furniture. This means communicating with consumers and gathering information about their nature so that products and promotional programs can be directed toward satisfying their needs and desires as closely as possible.

This type of approach has generally been neglected to the present time but the necessity of moving in this direction

has been recognized and stressed by many prominent members of the industry. Shaughnessy states in a recent article (36):

> ....our industry must find better ways of doing consumer research. We must find ways and means of learning much more from the users of our product than we know today. Only after we have a clearer picture in this connection can we hope to come up with the answers that will enable us to develop better methods of achieving the kind of growth pattern that is expected.

Rothberg also feels that the industry must move rapidly in this direction. He states (34):

> We have fallen badly out of touch with the consumer....The future of retailers and factories alike rest with a comprehensive, scientific understanding of our customer and how to satisfy her.

From these remarks it would appear that the furniture industry recognizes the importance of the consumer to them and that obtaining and using information about their living and behavior patterns can be an important step towards attaining the industry's growth objectives.

Such information can only be collected by means of sample surveys at the consumer level. To date most of these market research studies have been of a traditional nature in which a properly representative sample of the population is selected by an appropriate statistical method, information collected from the members of that sample about their

purchase and use of particular items or products and the results presented relating people's behavior to certain demographic characteristics such as age, income, education, etc.

It is essential that these basic facts be known, but they do not provide the whole answer. Often, more weight is given to this type of data than is really deserved as the variables are only superficial characteristics of the consumer and may not be very good predictors of market behavior for certain types of products. What must be known, in addition, is what are the motives, attitudes, interests and opinions which lead people to purchase one product rather than another, or to frequent one retail outlet rather than another. This would appear to be particularly true of household furniture where the style selected for the home is felt to be a reflection of the individual's taste, attitudes and style of living (2).

The objective of this study is to develop a more meaningful description of the consumer than the set of demographic characteristics presently used in most market research and show that this description can be practically related to market behavior regarding household furniture.

B. Scope:

The two major hypotheses to be investigated in this study are:

a) People live according to established behavior and attitude patterns which can be identified and measured.

b) These life-style patterns can be related to consumer behavior regarding household furniture.

As a result, the research is directed toward obtaining information from consumers regarding their activities, attitudes and opinions on numerous aspects of everyday living and to sort out the underlying order in this large number of empirical variables in terms of another, smaller set of variables termed "factors" or "principal components." These factors are then viewed in relation to their value as predictors of market behavior with respect to household furniture purchases.

C. Methodology:

The primary technique used to gather data for this study is a mail questionnaire developed by the author. In the course of conducting this study, the questionnaire has been submitted to two sample populations as follows:

1) To pretest the questionnaire wording and question format, the form was submitted to wives of staff

members and faculty within the Natural Resources Building at Michigan State University. These individuals were asked to try the form and to comment on how the content, structure and comprehensiveness of the questions could be improved.

2) The final improved version of the questionnaire (Appendix I) was submitted to two thousand residents of the Lansing, Michigan area for reply. These individuals were selected randomly from the Lansing area telephone directory and the letters addressed to the female member of the family.

Upon receiving the responses, the information was coded and subjected to computer analysis on the CDC 6500 available at the Michigan State University Computer Center. The library programs utilized were BMD05M and FACTOR A, Technical reports No. 31 and 34 of the Michigan State University Computer Institute for Social Science Research and the BASTAT routine, STAT Series Description No. 5 of the Michigan State University Agricultural Experiment Station.

From the results of this analysis, conclusions have been drawn regarding the hypotheses previously mentioned and the value of these techniques on research in this area.

CHAPTER II

Review of Literature

Due to the nature of this study, the literature in a number of areas which relate to the problem has been reviewed. These areas are as follows:

1) Consumer market studies relating to household furniture purchases and preferences.
2) Life style and its use in market research.
3) Application of factor analysis and multiple discriminant analysis in market research.

Since research on each of these topics has been conducted relatively independent from each of the others, the areas are discussed individually but an attempt is made to show how each is important to this present study.

1) Consumer research relating to household furniture.

The consumer and research in the area of consumer behavior are topics that have come to be important to the furniture industry only recently. The first important study was commissioned by the Kroehler Company in 1958 (38) and concerned consumers' needs in furniture and attitudes towards furniture by socio-economic class and stage in the life cycle. The study was redone in 1963 to see what changes

in consumer preferences and buying patterns had taken place in the interim. Although this information is presently considered out of date by the company,[1] a number of conclusions presented indicate that life style has considerable bearing on the type and quantity of furniture selected to meet a family's needs. The most important of these are as follows:

-a family's first concern in furnishing its house is centered upon providing itself with all the items necessary to its chosen way of life.

-furniture needs differ according to social status and they differ according to age.

-women experience vague feelings that their whole way of life, and the expression of their personalities, is somehow bound up in and defined by the furniture they own and use.

More recent studies have tended to follow up on some of these general ideas but have dealt with quite specific aspects of market behavior. Bourne (5) dealt with the influence of the consumer's reference-group on either a) the purchase of a product, or b) the choice of a particular brand or type, or c) both. He concluded that furniture, like clothing, magazines, and toilet soap, is found in all homes,

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[1]Personal correspondence with Kroehler Manufacturing Company, Public Relations Department, December 17, 1968.

causing their purchase to fall outside the area of reference-group influence. The visibility of these items, however, together with the wide variety of styles and types available, makes the selection of particular kinds highly determinant on reference-group influences.

Schulte (35) conducted recent investigations into the role played by style in the purchase decision for household furniture. He considered a number of areas including the importance of style to the purchase of a wide range of furniture items, the stage in the fashion cycle of today's most popular furniture styles, the difference in acceptance of furniture styles with varying geographic regions of the country, the degree of acceptance of various styles from one room of the home to another and the style preference in relation to the price of the furniture item. His major conclusions are as follows:

-style was rated as extremely important in the purchase of occasional tables and sofas and relatively unimportant in the purchase of recliners and beds.

-Mediterranean/Spanish, Country French and Italian Provincial styles are currently in the rapid growth stage of the fashion cycle while Traditional, Modern and Contemporary are well into the declining stage of their popularity.

-some styles have wider acceptance in some geographic regions than in others but, in total, the differences are not dramatic.

-the informal styles tend to be more popular in the family room or den and the more formal styles popular in the living room and master bedroom.

-the two styles which show the greatest sensitivity to price are modern and Mediterranean/Spanish with modern decreasing in popularity rapidly as price increases and Mediterranean/Spanish increasing in popularity with increasing price.

A study conducted by the Chicago Tribune (8) in 1959 is somewhat dated but provides an interesting in-depth look at the average consumer of household furniture. Its findings indicated that social class is an important factor in furniture consumption and also an important variable in explaining the style of furniture owned by a family. In 1959, modern was the style most frequently found in homes but the proportion increased at lower levels of the social scale. Contemporary, period, traditional and early American were termed "prestige" furniture, and their owners were found most frequently in the middle social class. Ownership of provincial and Danish modern styles, however, appeared to bear very little relationship to social class. They also suggested that each

of these styles seemed to imply very definite images to their owners. Examples of these feelings are:

Contemporary: owners of this style stress the functional aspects of their furniture but show greater interest in its esthetic value and its versatility for blending with other styles.

Early American: for these owners, their furniture exudes warmth, comfort--a homey feeling.

Provincial: they are lovers of fine woods.

The most recent industry efforts in the area of consumer research are a set of three studies commissioned by the Home Furnishings Marketing and Research Council, a corporation made up of 18 industry organizations. Each of these reports deals with a different segment of consumer activity and together they hoped to provide a basis for guiding the industry to better satisfy the needs and wants of its customers. The Arthur D. Little report (3) approaches the problem from the industry level. Its purpose is to examine the role of industry actions in enhancing the sale of home furnishings, the trade's perception of the impact of these actions on consumers, and the problems of securing cooperation among various trade levels. The approach is directed at

suggesting how the industry can improve its methods to have a greater effect on consumer purchases of durable goods than they do at the present time.

The Social Research and National Family Opinion reports (37, 28) approach the problem from the consumer level and attempt to evaluate a number of aspects of consumer behavior. National Family Opinion (28) attempts to characterize consumers who fit into each of the following four categories:

1) Those who have purchased furniture within the past year.
2) Those who have not purchased furniture within the past year.
3) Those who intend to purchase furniture within the next 12 months.
4) Those who do not intend to purchase furniture within the next 12 months.

The description of individuals in each category has been based on a profile of demographic characteristics such as age, geographic location, annual family income, family size and composition, and type of dwelling. Results are presented for each of these categories and for a number of product categories such as furniture, rugs/carpeting, and mattresses or boxsprings. For example:

Recent Purchasers: Furniture

a) Heavier than average furniture purchases were made in the Middle Atlantic, East North Central, and Pacific regions.
b) Fifty-four percent of all furniture purchases were made by homemakers 24-44 years old.
c) The highest percentage of furniture was bought by those in the $7000-$9999 income levels.
d) Eight out of ten furniture purchases were made by families who owned their own homes.

While this information is interesting, there is a great deal of overlapping in the variables from category to category so that no clear differentiation exists between consumers who are recent purchasers or are not recent purchasers, or who intend to buy or do not intend to buy.

The Social Research study (37) explores the rationales and motivations which govern the housewife's purchase of home furnishings. It deals with the questions of why home furnishings are important to the housewife and what brings her to market and to a purchasing decision. The approach is primarily attitudinal or motivational in nature with variations explained on the basis of life cycle, social class and personality factors.

All of these studies tend to be very subjective or qualitative in nature with any quantitative analysis restricted to frequency distributions which show the breakdown of the sample population into each of the various categories. No attempt appears to have been made at a serious statistical analysis to see if significant differences exist between individuals in one category or another or between individuals reacting in a particular manner and the population as a whole. This tends to make the studies very dependent on the competence of the researcher and could give rise to a certain bias in the results. Although the area of life style is touched on or implied in a number of the papers, particularly by the Kroehler Report (38), Bourne (5) and Social Research (37) it is not gone into in any great depth as a basis for explaining variability in behavior.

2) Life styles in market research

Life styles are becoming recognized more and more as important indicators of the way consumers act in the marketplace. Dr. E. Demby of Fairleigh Dickinson University is quoted by Marketing Insights as stating (25):

> Attitude and style of living, or psychographics, play a far bigger role in determining which people buy what products than do traditional demographic factors of age, income, education, occupation, and size of family.

Their effect on furniture purchases has also been recognized. Edward Frank, when discussing the people who purchase the

more modernistic styles of furniture stated (2):

> People who buy these home furnishings don't really fall into an age or financial group as much as they do into an educational or taste group.

Lazer (22) defines a life style. He feels it refers to the distinctive or characteristic mode of living, in its aggregative and broadest sense, of a whole society or segment thereof. It is, he states, a major behavioral concept for understanding, explaining, and predicting consumer and business behavior. It is the result of culture, values, resources and other environmental factors. The place of life styles in marketing is illustrated in Figure 1.

Wilson (45) has developed a set of twenty living pattern scales which he relates to the respondents reported market behavior regarding usage of a number of products, number of hours spent watching television and exposure to a number of magazines. This information is then cross-referenced to obtain a regression estimate ranking of the value of each of these media as an advertising medium for each of the products considered. He concludes that such non-demographic variables significantly increase our ability to account for variation within these activities.

Pessemier et al (31) identify fourteen activity, interest, and opinion factors and eight personality factors of housewives and discuss the relationship between these

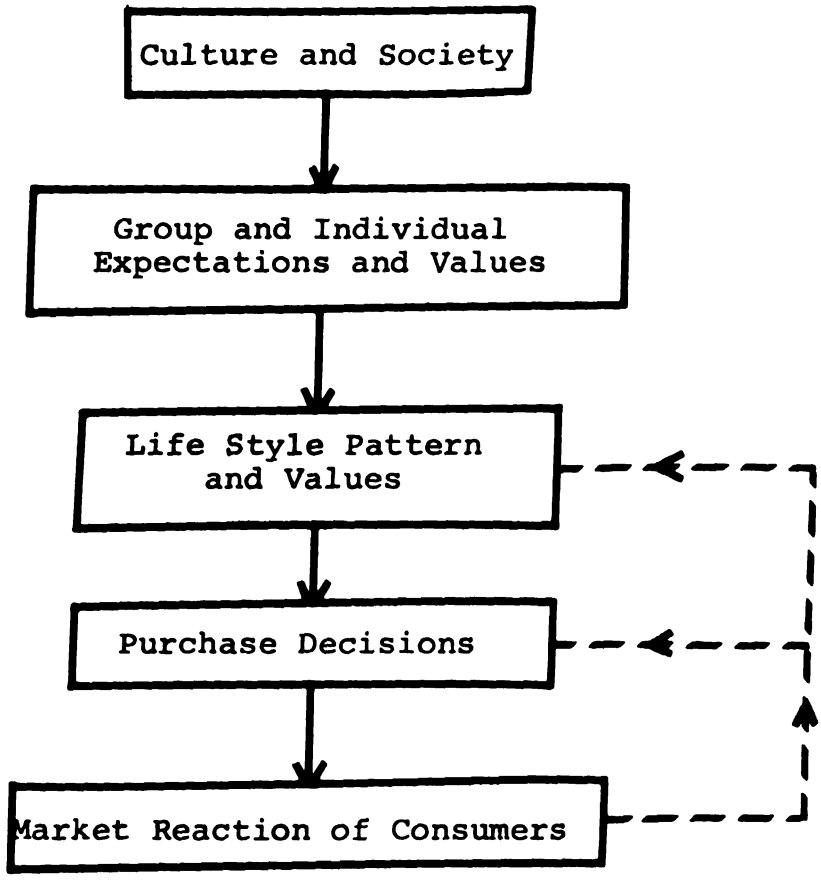

Figure 1. A life style hierarchy

Source: (22)

factors and market related behavior. Specifically, they use these twenty-two factors as independent variables to determine their value as predictors of a) advertising slogan awareness, b) brand recognition, c) purchase concentration by brand for several product classifications, and d) purchase of a local service commodity. They conclude that non-demographic characteristics markedly improve the description of market segments and they provide predictive power that goes well beyond the capacity of standard demographic measures used in the past. Their results also indicate that the measures on activities, interests and opinions seem to be better predictors than the standard personality factors.

3) Factor Analysis and Multiple Discriminant Analysis in market research.

The statistical techniques used in this study were not specifically designed for marketing or market research applications but have found considerable use in this area. The origin of factor analysis is generally attributed to Charles Spearman (17) in 1904 as a method for determining the common elements prevalent in a series of psychological tests. The technique is basically a way of describing the inter-relationships between a large number of variables in terms of a few mathematically derived factors.

Two of the earliest marketing studies worth noting using this method were conducted by Stoetzel (41) and Twedt (42). Stoetzel theorizes that complex consumer behavior is

caused by a few simple motives that can be found in the patterns of that behavior. He illustrates this premise with a factor analysis which tentatively explains consumer preference for nine liquors in terms of their sweetness, price and regional popularity. Twedt, in his study of advertising readership, carried the procedure one step further by testing the independent variables that the factor analysis suggested were most influential. This was done by calculating the multiple correlation coefficient between these suggested variables and a readership criterion. His results suggest that the predictive value of the variables is quite high.

Both Spector (39) and Mukherjee (27) have conducted studies similar to Stoetzel in that they end at the point of reporting the factor loadings and identification of the indicated variables. Spector identifies a set of six general factors which explain people's perception of a corporation's personality characteristics or its "corporate image." Mukherjee had his subjects rate a cup of coffee in terms of fourteen attributes to determine which of these attributes is most closely associated with overall preference. His results indicate that individual differences on coffee ratings can be best described in terms of the variation on comforting taste, heartiness of flavor, genuineness of product, and freshness. He considers these four factors the important motivating principles governing consumers' coffee preferences.

Pessemier et al (31) and Wilson (45) both use a factor analytic technique in the studies described previously. Their approach, however, approximates that of Twedt where the derived factors are tested by relating them to individual market behavior with the use of multiple regression analysis or similar statistical method.

Discriminant analysis has had relatively limited application to date in marketing studies. Evans (12) makes use of the technique to discover which of a predetermined set of variables best predict brand ownership in automobiles. Pessemier et al (31) performed discriminant analyses in an attempt to classify subjects into brand buying categories. Specifically they were searching for activity, interest and opinion or personality variables which demonstrate high predictive value to determine users of a particular brand of toothpaste, two different brands of cake mixes or subscribers to a TV cable service. Massey (26) feels that the technique has excellent potential for providing a set of aggregate similarity indices for a number of audiences of various advertising media. He illustrates this by evaluating the similarities among the audiences of a number of FM radio stations.

CHAPTER III

The Survey

A five-page questionnaire (Appendix I) was sent to 2000 women in March, 1969. These women were selected at random from the Lansing area telephone directory, which covers most of Ingham County. Ingham County is situated approximately 80 miles northwest of Detroit in the center of the state of Michigan. Lansing and East Lansing are situated in the northwest corner of the county and are the major metropolitan areas within the county. It has a total population of 240,700 people (40) with 125,100 residing within the corporate city limits of Lansing and another 35,500 in East Lansing. This population is distributed into 70,000 households with an average annual income of $10,270 per household in 1968 (40). This is a good deal above the United States average of $9012 per household for the same year. Most of this income is derived from the payrolls of Oldsmobile-Fisher Body Divisions of General Motors Corporation, Michigan State University, and the government of the State of Michigan which has its capital in Lansing.

By the final cut-off date, or five weeks after mailing, 555 questionnaires had been returned, a return rate of 27.8 percent. Of this number 520 or 26 percent of the total were

fully usable and the analysis has been based on these questionnaires. Unusable returns were caused primarily by failure of the respondents to answer all the questions and misinterpretation of the questions resulting in answers which could not be included in the analysis.

The questionnaire itself consisted of three different sections:

a) Six questions relating to standard demographic characteristics of the respondent and her family.

b) Five questions relating to the respondent's market behavior regarding household furniture purchases, specifically their last major (over $50) purchase.

c) Eighty questions relating to how the respondents live, spend their leisure time and attitudes and opinions on various subjects related to everyday living.

The respondents' profile on each of the demographic variables compared with general statistical data for Lansing and Ingham County is shown in Table 1.

The sample does not appear to be entirely representative of the population in Ingham County as a whole but does include some members of each of the important classifications. Respondents tend to be married, 35 to 49 years of age, be better educated and have higher family incomes than is the case for the general population. The author feels that this

Table 1. Comparison of respondents' profile on demographic variables with general statistical data.

Demographic Characteristic	Number of Respondents	Percent of Respondents	1960 Census Percent[1]	State Journal Percent[2]
Marital Status:				
Single	8	1.5	21.7[3]	5.4
Married	488	93.8	64.7	79.5
Widowed	14	2.7	10.2	11.0
Divorced	9	1.7	3.3	3.2
Separated	1	.2	1.2	.9
Family Size:				
1 or 2 members	146	28.1	32.4	32.3
3 or 4 members	226	43.5	40.9	40.8
5 or more members	148	28.5	26.6	26.9
Age of Household Head:				
24 and younger	27	5.2	15.3[4]	6.7[5]
25 to 34	117	22.5	24.0	23.2
50 to 64	136	26.2	20.3	23.7
65 and older	28	5.4	11.2	15.9
Education of Household Head:				
Grade School or less	23	4.4	27.1[4]	n.a.
Some High School	69	13.3	19.7	n.a.
Graduate High School	159	30.6	29.2	n.a.
Some college	127	24.4	11.3	n.a.
Graduate college	142	27.3	12.7	n.a.

Table 1 continued

Demographic Characteristic	Number of Respondents	Percent of Respondents	1960 Census Percent[1]	State Journal Percent[2]
Own/Rent Home:				
Own home	473	91.0	72.3	n.a.
Rent home	47	9.0	27.7	n.a.
Total Family Income-1968:				
Under $5000	23	4.4	30.6	26.3
$5000-7999	59	11.4	37.0	27.8
$8000-9999	87	16.7	14.2	16.7
$10,000-14,999	226	43.5	13.0)	
15,000-19,999	77	14.8	3.8):	29.2
Over $20,000	48	9.2	1.3)	

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[1] figures for Ingham County.

[2] figures for Metropolitan Lansing indicated.

[3] percentage of female population over 18 years old.

[4] percentage of male population

[5] figures for Ingham County.

n.a. not available

Source: (40)

is to be expected with a questionnaire of this type. It is quite long and requires a reasonable degree of comprehension to complete. This would tend to eliminate the poorer educated and less interested individuals. The emphasis on household furniture appeals to women that have a high degree of interest in their homes and its decoration. The majority of these are felt to be reasonably well educated, middle to high income people who own their own homes.

A sample with this distribution is not necessarily bad and may be more effective in achieving the objectives of the study than a sample more representative of the general population. A study recently completed by National Family Opinion, Inc. (28) indicates that

a) families with homemakers 25 to 54 years old account for 75 percent of all furniture purchases.
b) families with incomes from $7000 to $20,000 account for 64 percent of all furniture purchases.
c) eight out of ten furniture purchases are made by families who own their own home.

From this it would appear that the sample distribution is very representative of the furniture buying public so the conclusions will be more relevant than a sample based on the general population.

The market behavior of the respondents in regards to their last major (over $50) furniture purchase is shown in

Tables 2 to 6. In some cases this information is compared to data from the National Family Opinion, Inc. survey (28) to give an indication as to how representative this sample is of the national furniture buying public.

From Table 2, 53 percent of the respondents' last furniture purchases were for the living room or family room, 19 percent for the bedroom and 9 percent for the kitchen or dining room. This compares favorably with the national breakdown of 53 percent for the living room or family room, 22 percent for the bedroom and 10 percent for the kitchen or dining room (28). The most popular pieces purchased are living room sets, sofas, divans and occasional chairs and bedroom sets. These four items account for over 63 percent of total furniture purchases.

Furniture stores and furniture departments of department stores are responsible for over 90 percent of the sales to respondents (Table 3). The independent or chain furniture store is by far the most important retail outlet for the distribution of household furniture. Other outlets such as discount stores and mail-order houses are relatively insignificant when considering the total volume of goods sold.

Contemporary is the style most favored by respondents. Over 45 percent of the sample purchased items that are in the contemporary or modern category (Table 4). Colonial and Early American pieces are second in popularity while Provincial,

Table 2. Major furniture pieces or sets purchased by respondents

Item	Number of Respondents	Percent of Respondents	N.F.O. Survey
Living room set	75	14.4	9.0[1]
Sofa or Divan	79	15.2	14.0
Lounge or occasional chair	94	18.1	18.0
Dinette-kitchen set	46	8.8	11.0
End or coffee tables	28	5.4	9.0
Bedroom set	80	15.5	11.0
Chest, dresser, etc.	21	4.0	3.0
Other	95	18.6	25.0
Total	520	99.9	100.0

[1]Figures represent purchases in the 12 months prior to July, 1967.

Source: (28), Appendix II

Table 3. Type of store or outlet at which respondents' purchases were made.

Store or Outlet	Number of Respondents	Percent of Respondents	N.F.O. Survey
Department store	154	29.6	24.0[1]
Discount store	3	.6	-- [2]
Furniture store	323	62.1	64.0
Mail-order house	3	.6	-- [2]
Interior design shop	15	2.9	2.0
Wholesale outlet	2	.4	-- [2]
Other	20	3.8	10.0
Total	520	100.0	100.0

[1]Figures represent purchases in the 12 months prior to July, 1967.

[2]Included in "Other."

Source: (28), Appendix II

Table 4. Style of respondents' last major furniture purchase.

Style Category	Number of Respondents	Percent of Respondents	N.F.O. Survey
Colonial/Early American	172	33.1	34.1[1]
Provincial	75	14.4	9.8
Contemporary	236	45.4	50.6[2]
Spanish/ Mediterranean	37	7.1	5.5
Total	520	100.0	100.0

[1]Figures represent purchases in the 12 months prior to July, 1967.

[2]Includes figures for both Modern and Contemporary.

Source: (28), Appendix II

Spanish and Mediterranean pieces claim smaller segments of the market.

Respondents appear to be relatively satisfied with the styling characteristics of their original purchase. A number of them would now prefer to have the same item or set in a different style but they are a relatively small percentage of the total. Contemporary appears to be suffering the most from changing tastes, declining 7 percent in popularity (Table 6). Spanish/Mediterranean and Provincial registered the biggest gain in preference, increasing 4.2 percent and 1.6 percent respectively.

The desire to change to a different style appears to be directly related to the time since the item was purchased. From Tables 5 and 7 we can see that over 90 percent of those respondents who made their purchase within the last 12 months are satisfied with their original style selection while only 77 percent of those who purchased the piece over 5 years ago would choose the same style category if purchasing the same piece again. This may be due to either changing tastes on the part of consumers or merely a reflection of the fact that they tend to tire of a particular style after a time and want to get something different.

Table 5. Length of time since the last major furniture purchase by respondents

Class	Number of Respondents	Percent of Respondents
Within last 12 months	236	45.4
1 to 2 years	127	24.4
2 to 5 years	122	23.5
Over 5 years	35	6.7
Total	520	100.0

Source: Appendix II

Table 6. Style that respondents would select if purchasing the same furniture item again

Style Category	Number of Respondents	Percent of Respondents	N.F.O. Survey
Colonial/Early American	178	34.2	29.8[1]
Provincial	83	16.0	10.6
Contemporary	200	38.5	51.0[2]
Spanish/ Mediterranean	59	11.3	8.6
Total	520	100.0	100.0

[1]Figures represent intended purchases in the 12 months following July, 1967.

[2]Includes figures for both Modern and Contemporary.

Source: (28), Appendix II

Table 7. Percentage of respondents who would purchase the same item in the same style or a different style by length of time since the initial purchase was made

Length of time since last major purchase	Would purchase same style group	Would purchase different style group
Within last 12 months	91	9
1 to 2 years	91	9
2 to 5 years	83	16
Over 5 years	77	23
Overall	88	12

CHAPTER IV

DEVELOPMENT OF LIFE STYLE FACTORS

A. Procedure:

The life style factors are developed by subjecting the eighty questions or variables in section C of the questionnaire (Appendix I) to a factor analysis. The computer program used is Factor A: Principal Components and Orthogonal Rotations developed by the Michigan State University Computer Institute for Social Science Research (CISSR).

Factor analysis is basically a technique for representing a large number of tests or measurements, each made on many objects or persons, in terms of some smaller number of variables or factors. It describes the inter-relationships between this large number of variables in terms of a few mathematically derived factors. A number of numerical procedures are available for performing factor analysis but discussion here will be limited to principal components analysis since it is the basis for the CISSR program.

Principal components analysis is a technique which systematically extracts factors sequentially that have very little correlation with one another and such that the first will explain as much as possible of the variation in the original measurements, the second will explain as much as possible of that left unexplained, and so on.

The general starting point for conducting a factor analysis is the correlation matrix resulting from calculation of the correlation coefficients between each pair of measurements. A portion of the matrix obtained for this study is illustrated in Table 8. The complete matrix encompasses all 80 questions or variables from part C of the questionnaire. (See Appendix III).

From this matrix, factor analysis extracts the underlying factors which are independent of one another and which account for most of the variability in the original set of data from which the original intercorrelations were obtained. The computations involved in this procedure are quite complex mathematically but basically involve the solving of many equations simultaneously, one for each correlation in the matrix. An example of the type of equations involved is as follows (32):

r_{AB} = (A's loading on factor I) x (B's loading on factor I)

+ (A's loading on factor II) x (B's loading on factor II)

+ . . . . . + (A's loading on factor N)

x (B's loading on factor N)

r_{AB} = correlation coefficient between variable A and variable B

The solution of a case between two tests assumed to have only two common factors can be shown graphically as in Figure 2. The points A and B have been joined to the center

Table 8. Partial correlation matrix used for determination of life-style factors

Variable	1	2	3	4	5	6	7	8	9	10
1	1.00									
2	0.30	1.00								
3	0.12	0.11	1.00							
4	-0.01	0.05	0.10	1.00						
5	0.06	0.14	0.03	0.12	1.00					
6	-0.09	-0.08	0.12	0.00	-0.01	1.00				
7	0.05	0.09	0.13	0.13	-0.02	0.16	1.00			
8	-0.06	-0.04	-0.02	0.08	0.09	0.01	-0.03	1.00		
9	0.02	0.09	0.03	0.16	0.08	0.09	0.14	-0.02	1.00	
10	0.18	0.19	0.13	0.15	0.14	0.03	0.10	0.12	0.13	1.00

Source: Appendix III

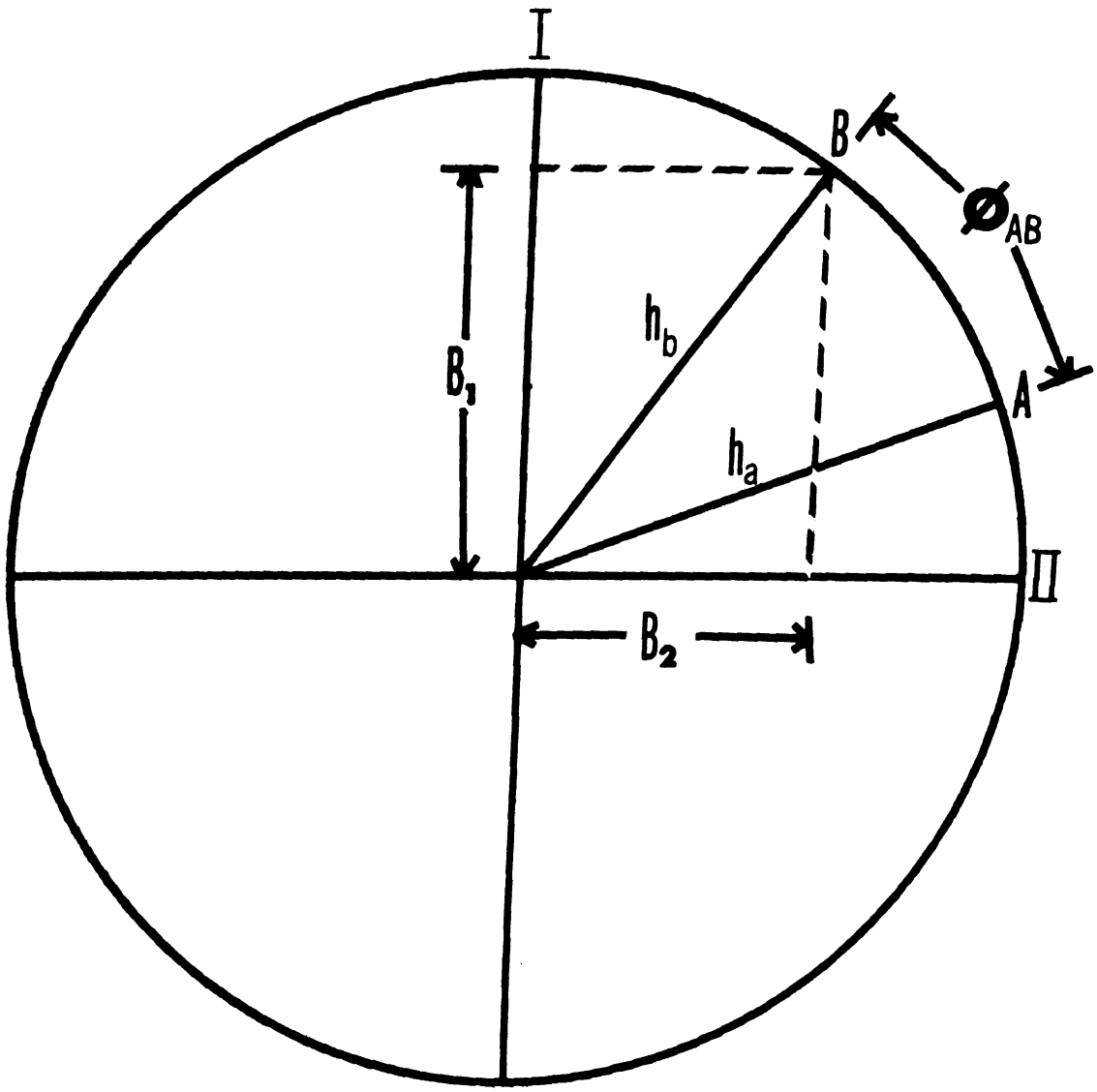


Figure 2. Graphical representation of the relationship between two tests, A and B, assumed to involve only two common factors.

Source: (18)

or origin and the square of the radiating lines or "test vectors" is equal to the communality of the variable or the correlation of the variable with itself. In this example $h_a = h_b = 1$ but this is not necessarily the case. The circumscribed circle of unit radius is intended to represent the fact that any point on the circumference indicates that the whole of the variance of that set of measures is completely accounted for by the two common factors. The correlation coefficient between A and B is given by the equation (18)

$$r_{AB} = h_a \, h_b \cos \phi_{AB}$$

and the factor loadings of variable B on factors I and II are represented by B_1 and B_2 respectively.

From Figure 2 it is evident that the relationship between tests A and B would be preserved even if the reference axes of factors I and II were allowed to rotate to new positions. Rotation of these axes is often used as an extension of principal components analysis in order to obtain more meaningful factors. Orthogonal rotations are one of the more popular approaches to this problem, generally using either the Varimax or Quartimax methods. Generally speaking, the Quartimax method is a method of rotating the axes so that each measurement is described in terms of as few factors as possible. The Varimax method, on the other hand, obtains a rotation of the factor axes so as to minimize the number of measurements in which any one factor occurs (9).

To illustrate the solution shown in Figure 2 we can assume a hypothetical case where we are dealing with only two of the eighty questions. Again we will assume that no errors of measurement exist and that all of the variance can be accounted for by the two hypothetical common factors so that $h_a = h_b = 1$. The correlation coefficient between tests A and B has previously been defined as:

1) $r_{AB} = h_a\ h_b \cos \phi_{AB}$

a) r_{AB} = (A's loading on factor I) x (B's loading on factor I) + (A's loading on factor II) x (B's loading on factor II)

The coefficient, r_{AB}, can be determined by both formulae from information available in Figure 2. Figure 3 shows a specific case where the angle between the positions of variables A and B is 45°. Therefore, r_{AB} is equal to .71.

To determine r_{AB} from the factor loadings of each variable, we see from Figure 3 that the loading of variable A on factor I is .52 and on factor II is .86. Similarly, the loading of variable B on factor I is .96 and on factor II is .25. Therefore, r_{AB} is equal to (.52) (.96) + (.86) (.25) or .71. This is the principal components solution to the problem.

Figure 3 also serves to demonstrate that the relationship between A and B is preserved even if the reference axes

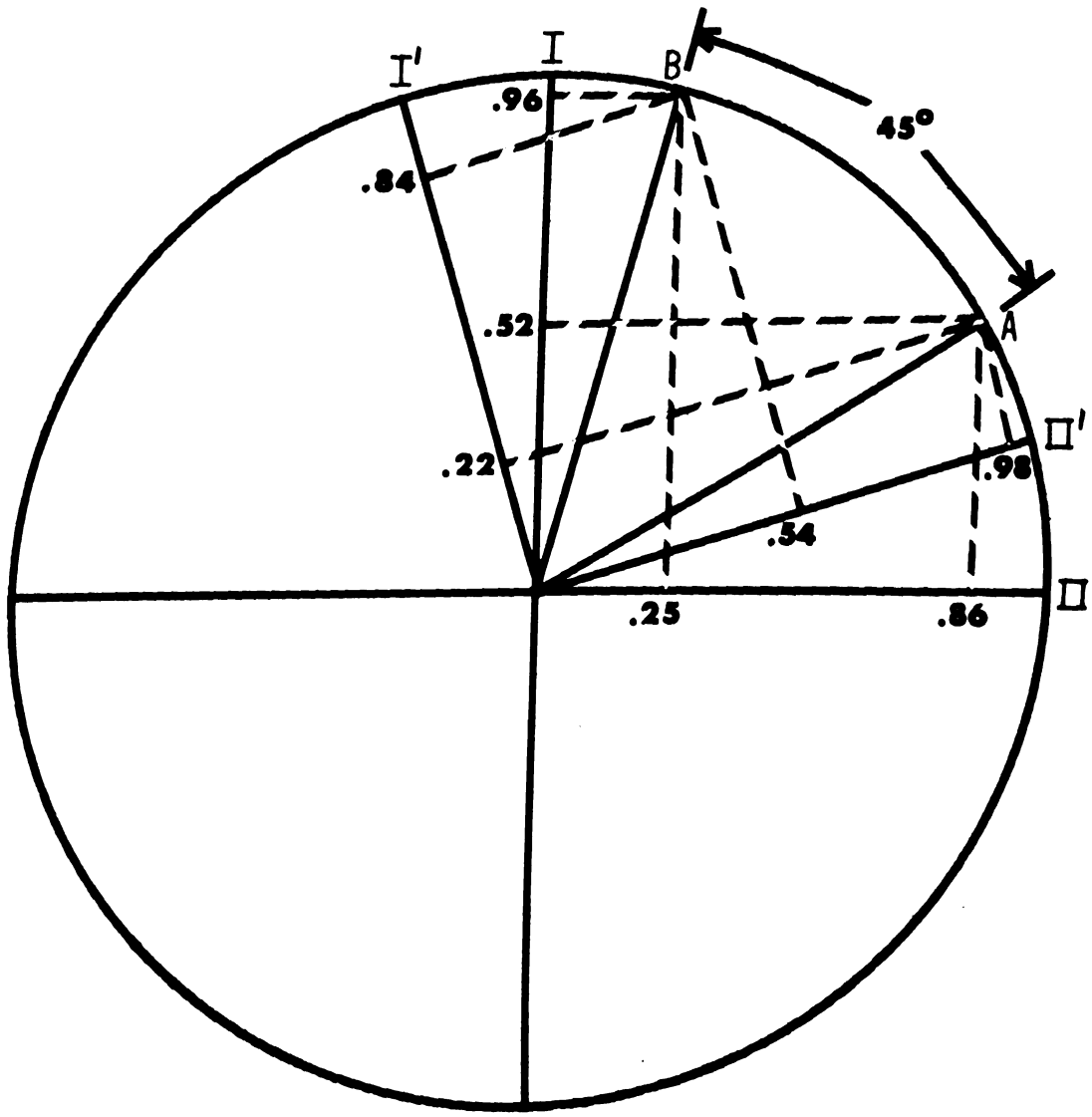


Figure 3. Graphical representation of the principal components and rotated solution between two tests, A and B, assumed to involve only two common factors.

of factors I and II are rotated to new positions. If I' and II' represent the new position of these reference axes, the loading of variable A on these new factors becomes .22 and .98 and that of variable B becomes .84 and .54. Determining r_{AB} from these new loadings gives a result of .71 or the same as the principal components solution.

This information is generally presented in tabular form as follows:

	Principal Components Solution		Rotated Solution	
Factor	I	II	I'	II'
A	.52	.86	.22	.98
B	.96	.25	.84	.54

Each of these solutions is a valid solution to the problem and it is up to the researcher to select the one which gives the more meaningful and identifiable factors.

This explanation is a great simplification in reference to this study since, rather than two variables or tests, we are dealing with eighty. A graphical explanation of this case is impossible since each factor must be represented by a separate dimension. As a result, anything beyond the two factor case is extremely difficult to illustrate. In our case, with fifteen to twenty well-defined factors, it becomes impossible.

B. Results:

The results of the factor analysis on the eighty questions in part C of the questionnaire are shown in Table 9. The generation of fifteen factors by the Varimax Rotation method accounts for 49.84 percent of the explainable variation in the entire set of variables. These initial fifteen factors are quite clearly defined and readily identifiable. Although additional variation could be accounted for by generating more factors, it was felt that the difficulty in identifying the dimensions and the small proportion of total variation accounted for by each additional factor does not warrant including any more in the analysis. Table 9 shows the primary dimension for each of these factors and the percentage of total variation accounted for by each.

Table 10 to Table 13 illustrate some of the basic concepts of factor analysis and show how these dimensions are determined. Each table contains three columns of information: "Question Number" and "Mean Score" are simply reportings of the items in part C of the questionnaire and the average score of all respondents on that particular item based on the 1-5 scale used with the questions. The final column, "Factor Loading" presents the results of the factor analysis. Only four of the strongest factors are presented here. The remainder are presented in similar form in Appendix V of this study.

Table 9. Description of life-style factors derived by factor analysis of eighty variables in part C of consumer questionnaire

Factor Number	Factor Name	Proportion of Total Variance Percent
1	Fashion Conscious	5.07
2	Poor Housekeeper	4.31
3	Careful Shopper	3.52
4	Disinterest in community affairs	4.51
5	Appreciation of the arts	4.06
6	Sports spectator	3.24
7	Do-it-yourself homemaker	2.58
8	Conservative shopper	3.05
9	Child oriented	3.53
10	Modern Thinker	3.62
11	Energetic	2.77
12	Weight conscious	2.42
13	Sports participant	2.51
14	Socialite	2.83
15	Self-centered	1.82

Since factor analysis is a methodology by which a series of items or questions are identified which tend to form a common pattern and not all questions are identical, it follows that all questions do not measure the basic underlying dimension to the same degree (45). The analysis provides a "loading" to indicate the degree which a question measures the particular dimension. This is a numerical quantity ranging from -1.00 to +1.00 and the higher the positive loading, the more the particular question defines the underlying dimension. Negative loadings are interpreted as just the reverse.

In practical work with factor analysis, loadings as high as $\pm$ 1.00 never appear. Generally, a loading of $\pm$.40 or up is considered quite good and one over $\pm$.50 to be strong (45). In this study the author has adopted a loading of $\pm$.40 as being the minimum acceptable. An exception to this is factor 15 where only one variable had a loading greater than $\pm$.40 so the acceptance level was lowered to $\pm$.30 to obtain a better concept of the dimension.

As shown in Table 10, factor 1 has been labelled "Fashion Conscious." The process of naming a dimension derived by factor analysis is a rather subjective procedure. Basically, the researcher puts a label on the results that, to him, best typifies the common element that seems to underlie the various questions in the scale. From Table 10 we can see that each of the first five questions have high positive

Table 10. Factor 1 - fashion conscious

Question Number		Mean Score	Factor Loading
41	Fashion in clothes is more important than comfort to me.	4.10[1]	.70
59	Dressing fashionably is an important part of my life.	3.24	.69
19	I enjoy trying the latest style in hairdo's.	3.18	.66
35	I use eye shadow or eye liner three times a week or more.	3.63	.66
63	I have copied the way people dress on television or in magazines.	4.00	.60
66	I dress for comfort, not for fashion.	2.39	-.56
38	I generally have at least one outfit that is the very latest style.	2.67	.54
62	I presently own a wig, fall or other hairpiece.	3.70	.51
55	I have several different shades of lipstick to go with different dresses.	2.79	.44

Proportion of total variance - 5.07%

[1]The smaller the mean score, the greater the general agreement with the question.

loadings and refer to placing great emphasis on dressing fashionably and the use of techniques and items which tend to make a woman appear to be "in fashion." Item six "I dress for comfort, not for fashion" appears to deviate from this trend but since it has a negative loading, the opposite meaning must be assumed so that it does follow in the same line. The remaining items also support the earlier supposition so "Fashion Conscious" would appear to be a reasonable label for this particular factor.

The same procedure was used to label each of the factors. Table 11 shows that factor 2 has high negative loadings on questions relating to cleaning and maintaining a well-run home and a positive loading on the question indicating carelessness or lack of concern for these matters. For this reason factor 2 has been labelled "Poor Housekeeper."

Similarly from Tables 12 and 13, factors 3 and 5 have been labelled "Careful Shopper" and "Appreciation of the Arts" respectively.

These fifteen life style factors have been used in the analysis of consumer purchase behavior regarding household furniture. To facilitate this procedure, it is necessary to determine a factor score for each respondent on each of the fifteen factors. This has been done by means of the following equation:

Table 11. Factor 2 - Poor Housekeeper

Question Number		Mean Score	Factor Loading
2	I really enjoy most forms of housework.	2.32	-.81
40	I really enjoy cleaning my house.	2.51	-.80
58	My idea of house cleaning is "once over lightly."	4.04	.65
73	Keeping my home nice satisfies my creative needs.	2.43	-.51
18	My husband compliments me on the way I run the house.	2.43	-.43
1	I often redecorate my house or apartment.	3.06	-.42

Proportion of total variance - 4.31%

Table 12. Factor 3 - careful shopper

Question Number		Mean Score	Factor Loading
37	I study the food ads each week so I can make the best buy.	2.67	.77
17	I shop for specials.	2.33	.72
4	When I find a coupon in the paper I clip it and redeem it the next time I go shopping.	3.05	.71
56	I watch the advertisements for announcements of sales.	2.25	.70

Proportion of total variance - 3.52%

Table 13. Factor 5 - appreciation of the arts

Question Number		Mean Score	Factor Loading
52	I enjoy listening to classical records	2.84	.82
45	I generally prefer classical to the more popular forms of music.	3.16	.76
6	I enjoy going to concerts.	2.97	.75
68	I enjoy going through an art gallery.	2.82	.65
15	I enjoy spending leisure time in museums.	3.22	.55

Proportion of total variance - 4.06%

$$\text{Factor Score}_{i\,j} = \sum_{k=1}^{n} (\text{factor loading}_k)\ (\text{questionnaire value}_{ik})/n$$

where i = respondent i = 1 - 520

j = Factor number j = 1 - 15

k = variable number k = 1 - n

n = number of variables with factor loadings greater than $\pm$ .40 in factor j.

With this formula, each respondent is assigned a score on each factor ranging from +5.00 to -5.00. Due to the coding of the original questions from 1 - Strongly agree, to 5 - Strongly disagree (see Appendix I) and the influence of negative factor loadings, the lower the absolute value of the respondent's factor score, the higher her rating on the factor.

The question may arise as to whether we are really measuring anything different with this type of life-style variable than with the regular demographic variables used in previous market studies. Table 14 answers this question. It shows the correlation coefficients between the fifteen life-style variables and the six demographic variables in part A of the questionnaire. From the table it can be seen that many of the factors are relatively independent of the demographics and even though a number of the coefficients are statistically significant, the values of the coefficients are so small that only a weak linear relationship is indicated.

Table 14. Correlation coefficients between demographic and life-style variables

Variable		Correlation with Demographic Variables					
		A-1	A-2	A-3	A-4	A-5	A-6
A-1	Marital status	-	-	-	-	-	-
A-2	Family size	-.08	-	-	-	-	-
A-3	Age of household head	.04	-.34	-	-	-	-
A-4	Education of household head	-.03	-.00	-.20	-	-	-
A-5	Own/rent present home	.03	-.09	-.20	.05	-	-
A-6	Total family income	-.22	.06	.04	.37	-.15	-
C-1	Fashion conscious	.04	-.01	-.23	.17	.09	.18
C-2	Poor housekeeper	.06	.06	-.09	.21	.10	.11
C-3	Careful shopper	-.04	.12	.09	-.07	-.05	-.19
C-4	Disinterest in community affairs	-.05	-.08	-.14	-.14	.12	-.16
C-5	Appreciation of the arts	.00	-.04	.06	.28	.03	.12
C-6	Sports spectator	.00	-.09	.09	.03	.07	.05
C-7	Do-it-yourself homemaker	-.01	.10	-.13	.07	-.02	-.09
C-8	Conservative shopper	-.05	-.02	.09	-.09	-.08	-.09
C-9	Child oriented	.04	-.02	.04	-.12	-.02	-.13
C-10	Modern thinker	-.02	-.01	-.06	.25	.02	.18
C-11	Energetic	-.04	.06	-.12	.07	.05	.14
C-12	Weight conscious	.05	-.15	.22	-.01	-.03	.04
C-13	Sports participant	.05	.00	-.15	.02	.01	.02
C-14	Socialite	.01	-.23	-.01	.13	.02	.20
C-15	Self-centered	.01	-.08	-.03	.11	.06	.06

a/ a correlation coefficient of $\pm$ .11 or larger is significant at the .01 level.

The largest coefficient, .28 between variables A-4 and C-5, accounts for less than 8 percent of the total variation between the two variables.

Some explanation may help to clarify the implications of the data in this table. Several life-style patterns such as interest in watching sports events (factor 6), conservative shopping behavior (factor 8), and self-centeredness (factor 15) appear to be well distributed throughout all socio-economic groups. Other patterns, such as fashion consciousness (factor 1) bear some relationship to the socio-economic classifications. Highly fashion conscious women appear to be younger, married to husbands who have a high level of formal education and have higher than average total family incomes. Careful shoppers (factor 3) tend to have larger families and lower family incomes as would logically be expected.

CHAPTER V

CONSUMER MARKET BEHAVIOR IN HOUSEHOLD FURNITURE

A. Procedure

The primary technique for relating the life-style factors developed in the previous chapter and the demographic variables from part A of the questionnaire to certain aspects of consumer market behavior is the method of N-way multiple discriminant analysis. It is a statistical technique for making forecasts or estimating structural parameters in problems where the dependent variable appears in dichotomous form, i.e. did or did not purchase Provincial styled furniture. Its use and interpretation are much the same as in multiple regression analysis, i.e. a linear combination of numerical values for two or more independent variables is used to predict the behavior of a dependent variable. The computer program used for this analysis is BMDO5M: Maximum Likelihood Classification also developed by CISSR.

Basically, the procedure in this case attempts to predict to which group an individual belongs, based on the sets of group means on each variable considered, together with the set of sample variances and co-variances of the variables. That is, the individual is assigned to the group whose characteristics are most like his own. Since it is known

beforehand which group the person actually belongs to, a table of correct and incorrect classifications can be prepared. This table is commonly known as a "confusion matrix" and the fewer the misclassifications of individuals to groups within the matrix, the more distinct or dissimilar are the groups.

To illustrate this technique we shall briefly discuss the two-way situation with two populations and only two variables. The initial step in this form of analysis is to estimate the coefficients in a linear discriminant function. An example of this type of function in terms of two variables, X and Y, is as follows (26):

$$f_i = c_x X_i + c_y Y_i$$

The subscript i is for each individual considered in the analysis.

A critical value of f is determined such that if the individual's f value is above the break-point he is classified in one group and if it is below it he is assigned to the other. The function f is defined so that it discriminates between members of the two groups in the most efficient manner.

For example, assume there are measurements on two variables for a sample drawn equally from two populations, A and B. Figure 4 represents the scatter diagram for this sample. Now we have an additional measurement and it must be assigned to either A or B in a way that minimizes the probability of misclassification.

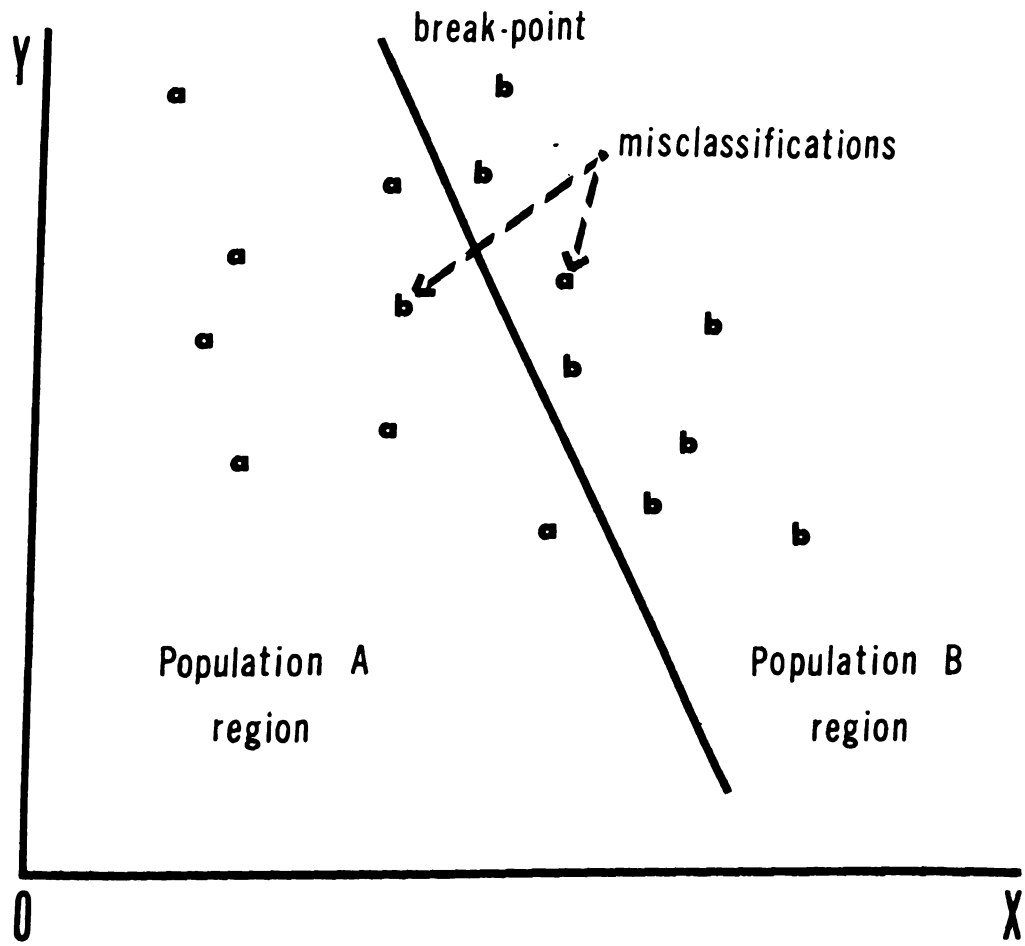


Figure 4. Discrimination of two populations on two variables.

Source: (26)

In this case we base our estimate of the coefficients (the c's) of the discriminant function on the information provided by the original observations. Having values for the c's allows us to assign a value of f to any possible combination of X and Y, whether from the original sample or a new sample. We can then use mathematical methods to estimate the probability that, given a particular value of f, the observation would fall in A. The probability distributions for populations A and B may look like those illustrated in Figure 5.

Figure 5 also contains a vertical line which represents the discriminant or break-point value of f. The break-point is set half way between the means of f for A and B, so, at this point, an observation has about an equal probability of falling in A or B. The shaded areas on either side of the break-point give the total probability of misclassifying a particular observation.

The same concepts apply to the general or N-way case as well as the two-way example. Expansion of the case to consider three populations of individuals (A, B and C) describable in terms of two variables (X and Y) shows more clearly how the procedure works with a number of groups and a number of variables. Figure 6 has a scatter diagram which shows the variable values of individuals in each of three populations.

The problem in this example is to define three mutually exclusive regions (a, b and c) which exhaust the X-Y space.

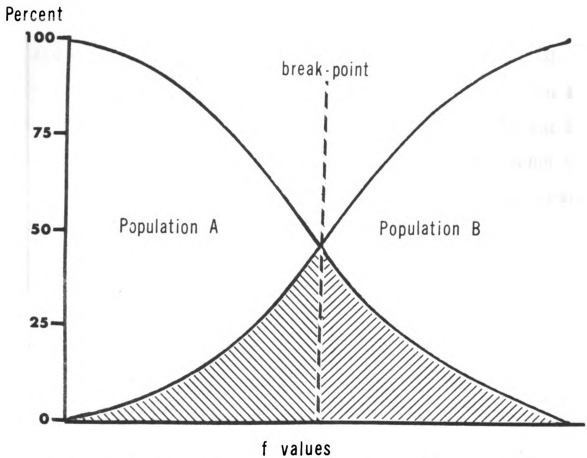


Figure 5. Probability that an observation will fall in population A or B with a given f value.

Source: (26)

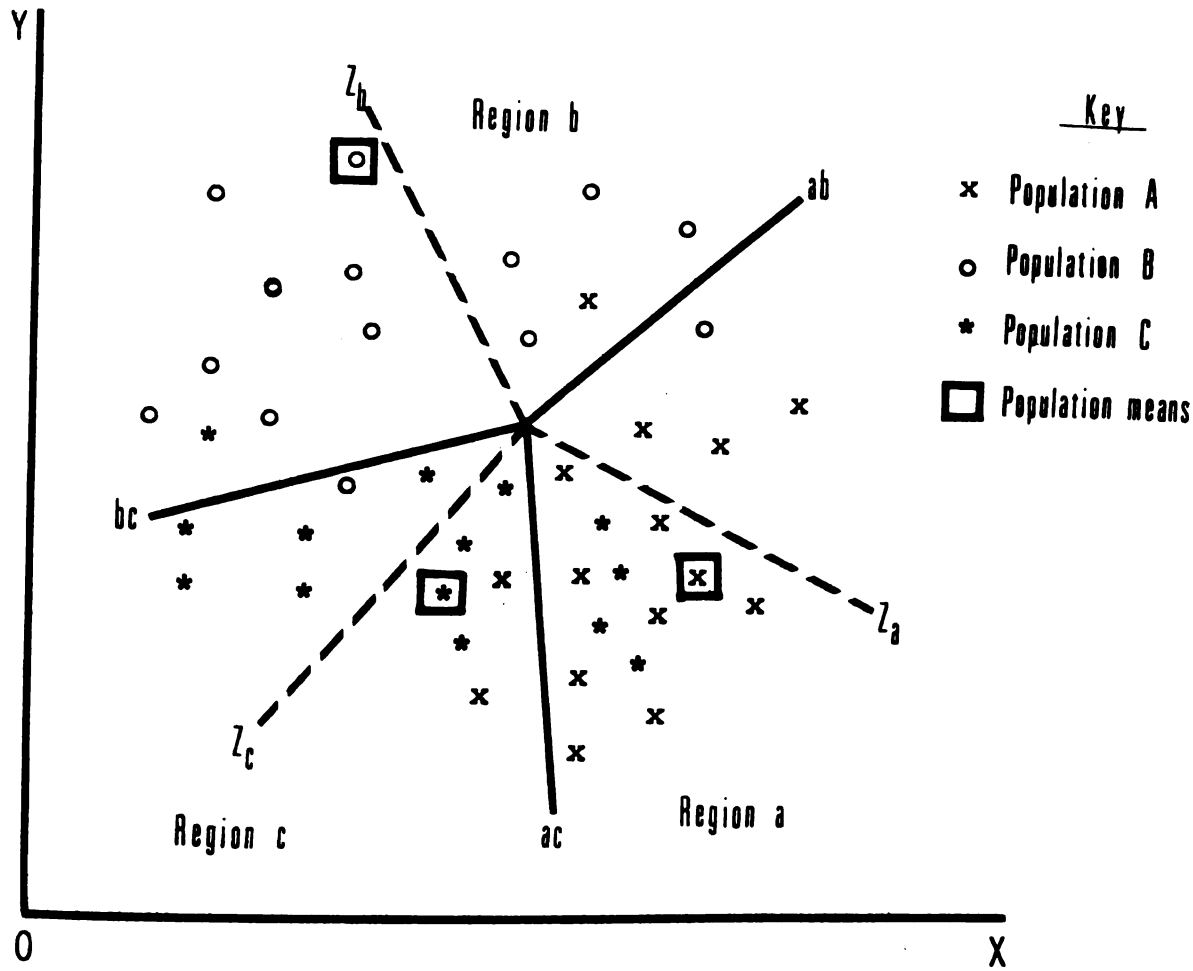


Figure 6. Acceptance regions for three populations on two variables.

Source: (26)

The region boundaries should be set up so that when the X and Y values put an individual into a given region, it is more probable that he actually is a member of that population than of any other population.

In Figure 6 the lines separating the three regions represent loci of equal probability for their respective pairs of regions. When a given observation lies to one side of the threshold line, the probability that the observation belongs in this region is greater than for any other region. This maximum probability criterion does not eliminate mistakes in classification but if the classification process were repeated many times with similar groups of individuals, this procedure would result in the lowest possible proportion of errors.

Each of these regions is determined by using the sample data to estimate the parameters of linear discriminant functions for the populations. These are represented by the lines Z_a, Z_b and Z_c in Figure 6. Once the parameters of these functions have been estimated, the boundaries are set so that each discriminant line (Z) bisects the angle between its respective boundary line, i.e. Z_a bisects the angle between ab and ac. While the means of the variables fall within the acceptance regions for their respective populations, they do not have to lie on the discriminant lines.

Figure 6 also provides the information for using confusion matrices to evaluate the similarity of populations. Table 15 shows the correct and incorrect classifications for the example while Table 16 shows the same information in normalized form.

Table 15. Predicted and actual population membership for example shown in Figure 6.

	Predicted			
Actual	A	B	C	Total
A	12	1	2	15
B	1	13	1	15
C	4	1	10	15
Total	17	15	13	45

Table 16. Normalized confusion matrix for populations of example shown in Figure 6.

	Predicted			
Actual	A	B	C	Total
A	.80	.07	.13	1.00
B	.07	.86	.07	1.00
C	.27	.07	.67	1.00

The figures along the diagonal indicate that the number of correct predictions for B is greater than either A or C. The off-diagonal values indicate that a member of A is most likely to be misclassified as a C, and a member of C to be wrongly classified as an A. From this one can conclude that populations A and C are more nearly alike than are A and B, or B and C.

This procedure has been used in this study to evaluate the similarities between groups who have demonstrated particular market behavior relating to two important aspects of household furniture purchases;

1) The type of store or outlet at which their last major furniture purchase was made.
2) The style category to which this last major purchase belongs.

B. Results

An N-way multiple discriminant analysis has been performed on the questionnaire data using questions B-2, "At what type of store or outlet was this purchase made?" and B-3, "Of the attached diagrams, which page has a drawing which best represents the styling of this item or set?" as the dependent variable. (See Appendix I). In each case, discrimination has been attempted using three different combinations of independent variables:

1) the six demographic variables in section A of the questionnaire.
2) the fifteen life-style variables derived from the eighty questions in section C of the questionnaire.
3) the combination of twenty-one demographic and life-style variables.

This enables comparison of the ability of each type of variable to provide maximum separation among each group in the dependent variable and also to measure the complementary effect of combining both types of independent variable.

1) Type of retail outlet

In the original questionnaire design, respondents had seven different alternatives or choices from which to identify the type of store or retail outlet at which their last major furniture purchase was made. However, it can be seen from Table 17 that the two options, department store and furniture store, account for over ninety percent of the total replies. Because of this highly skewed distribution and the tendency of the computer program, BMDO5M, to equalize the frequency of occurrence among groups, the author has decided to restrict the analysis to a two-way discrimination between these two groups rather than the seven-way analysis that was originally intended. These two types of outlets are by far the major retail distribution channels for household furniture so discrimination between them should be much more meaningful and easier to comprehend.

Table 18 shows the confusion matrix for the classification of 477 respondents on the basis of the six demographic variables in both raw and normalized form. Entries on the diagonal of the raw data matrix signify correct classifications or hits, while the off-diagonal elements represent misses. For this case the percentage of hits is 56.6%. The normalized matrix is obtained by dividing each of the raw data entries by their row total. These new entries represent the probabilities that an individual who is actually in a given group will be so classified.

This result of correctly classifying 270 of the 477 respondents is not very indicative of good predictive ability in a two-way discrimination. A completely random basis of classification, such as flipping a coin, would have correctly classified approximately fifty percent of the sample. Increasing this percentage to 57% by using the demographic variables can not be considered a significant increase.

Somewhat better results are obtained if the demographic variables are combined with the fifteen life-style variables and discrimination attempted on the basis of all twenty-one factors. Table 19 shows that this procedure correctly classifies 289 of the 477 individuals or 60.6%. This is an improvement over the previous case but the proportion of hits is still not high enough to state that these variables have great predictive value for discriminating between the two groups.

Table 17. Type of store or outlet at which respondents' purchases were made.

Store or Outlet	Number of Respondents	Percent of Respondents
Department store	154	29.6
Discount store	3	.6
Furniture store	353	62.1
Mail-order house	3	.6
Interior-design shop	15	2.9
Wholesale outlet	2	.4
Other	20	3.8
Total	520	100.0

Table 18. Raw data and normalized confusion matrix for six demographic factors related to type of retail outlet where furniture was purchased.

a) Raw data matrix

	Predicted		
Actual	Department store	Furniture Store	Total
Department store	86	68	154
Furniture store	139	184	323
Total	225	252	477

Total hits = 270, Percent hits = 56.6%

b) Normalized matrix

	Predicted		
Actual	Department store	Furniture Store	Total
Department store	.56	.44	1.00
Furniture store	.43	.57	1.00

Table 19. Raw data and normalized confusion matrix for twenty-one life-style and demographic factors related to type of outlet where furniture was purchased.

a) Raw data matrix

	Predicted		
Actual	Department store	Furniture store	Total
Department store	100	54	154
Furniture store	134	189	323
Total	234	234	477

Total hits - 289, Percent hits = 60.6%

b) Normalized matrix

	Predicted		
Actual	Department store	Furniture store	Total
Department store	.65	.35	1.00
Furniture store	.41	.59	1.00

Discrimination based solely on the fifteen life-style factors gives the best results for separating individuals who made their last major furniture purchase at a department store or a furniture store. From Table 20 we can see that these factors correctly classified 302 individuals or 63.3% of the sample. This is an improvement of almost seven percent over the case using only the demographic variables. A percentage of hits in this range does not mean that this type of factor can be accepted without question for predicting consumers' buying patterns but it does indicate that their attitudes and opinions regarding the way they live do have considerable influence on where they shop.

Table 20. Raw data and normalized confusion matrix for fifteen life-style factors related to type of retail outlet where furniture was purchased.

a) Raw data matrix

	Predicted		
Actual	Department store	Furniture store	Total
Department store	100	54	154
Furniture store	121	202	323
Total	221	256	477

Total hits = 302, Percent hits = 63.3%

a) Normalized matrix

	Predicted		
Actual	Department store	Furniture store	Total
Department store	.65	.35	1.00
Furniture store	.37	.63	1.00

Table 21 illustrates some of the differences between the two groups in terms of their life style. It presents the mean scores for individuals in each of the two groups on each of the life-style factors. Because of the scaling procedure used in the questionnaire and the method for determining the individual factor scores, small absolute values for the mean indicate a high degree of association with the factor. For example, in variable 1 the score of 1.65 for furniture store shoppers indicates that they are more fashion conscious than department store shoppers who have a mean score of 1.78. Also, they tend to be more conservative in their shopping behavior as indicated by a mean score of -.04 opposed to a score of -.08 for department store shoppers.

Table 21. Table of comparative means for two types of retail outlets and fifteen life-style variables.

	Variable	Department Store	Furniture Store
1.	Fashion conscious*	1.78	1.65
2.	Poor housekeeper	- .81	- .79
3.	Careful shopper*	1.80	1.93
4.	Disinterest in community affairs*	-1.84	-1.98
5.	Appreciation of the arts	2.12	2.11
6.	Sports spectator	2.87	2.77
7.	Do-it-yourself homemaker	1.96	1.94
8.	Conservative shopper	- .08	- .04
9.	Child oriented	1.08	1.06
10.	Modern thinker	-1.55	-1.60
11.	Energetic	.71	.65
12.	Weight conscious	1.93	1.97
13.	Sports participant	2.23	2.23
14.	Socialite	1.83	1.77
15.	Self-centered	- .24	- .27

*Means are significantly different at .10 level.

By looking at the means for those variables which tend to show some degree of significant difference we can obtain considerable insight into the characteristics of individuals in each group. However, it should be mentioned that difference between means is not the only factor that contributes to discrimination between the two populations. The degree of correlation of the variables between groups and the complimentary effect of some variables acting together are also important factors but looking at the means should give us an adequate profile of each population.

From Table 21 we can see that individuals who purchased their last major furniture item in a furniture store tend to be more fashion conscious, interested in social activities and relatively carefree in their shopping behavior. Respondents who shopped in department stores appear to be more careful in spending their money, have less interest in community affairs and activities, and do not have as high a degree of fashion consciousness.

From this we can picture the typical furniture store shopper as the contemporary idea of the modern housewife, oriented towards entertaining and participating in community activities. She is more likely to buy things currently in vogue or that strike her fancy, with price primarily a secondary consideration. She is, however, conservative in

her shopping behavior preferring brand-name merchandise with which she is familiar or that has been recommended by her friends.

The average department store shopper appears more as the "plain" housewife. She is not very social oriented and takes very little active part in community activities. Her overall attitude is more self-oriented. She is the type who is apt to do a great deal of shopping around before making a purchase. Price is more important to her and she is likely to pass up something she really likes for something that is just acceptable or to purchase unbranded merchandise and new products, if the price is right.

2) Style of furniture

In question B-3 of the questionnaire, respondents were asked to select a diagram that best illustrates the styling features of their last major furniture purchase from several pages of drawings. This serves to classify the purchase into one of four different furniture style groupings. These groupings include almost all styles currently available, yet have quite distinctive features from one to the other.

Table 22 lists these categories and the number of respondents assigned to each group. Contemporary is the most popular style category accounting for 45.4% of total respondents' purchases. Colonial/Early American accounts for the

next largest proportion of purchases or 33.1%. Provincial and Spanish/Mediterranean have the smallest frequency of purchase with 14.4 and 7.1% respectively.

Table 22. Style of respondents' last major furniture purchase.

Style Category	Number of Respondents	Percent of Respondents
Colonial/Early American	172	33.1
Provincial	75	14.4
Contemporary	236	45.4
Spanish/Mediterranean	37	7.1
Total	520	100.0

A four-way discriminant analysis has been run using these four categories as the dependent variable and the three combinations mentioned earlier in the chapter as independent variables. Table 23 shows the confusion matrix for the classification of 520 respondents by the six demographic variables in both raw and normalized form. For this case, the total number of hits is 170 or 32.7%. The primary reason for this low percentage of hits is that these variables are unable to differentiate individuals who purchased Colonial/ Early American from those in the other categories. We can see from the normalized matrix that the probability of an

Table 23. Raw data and normalized confusion matrix for six demographic factors related to style of furniture purchased.

a) Raw data matrix

	Predicted				
Actual	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean	Total
Colonial/ Early American	21	46	63	42	172
Provincial	8	30	20	17	75
Contemporary	33	50	101	52	236
Spanish/ Mediterranean	2	8	9	18	37
Total	64	134	193	129	520

Total hits = 170, Percent hits = 32.7%

b) Normalized matrix

	Predicted				
Actual	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean	Total
Colonial/ Early American	.12	.27	.37	.24	1.00
Provincial	.11	.40	.27	.22	1.00
Contemporary	.14	.21	.43	.22	1.00
Spanish/ Mediterranean	.05	.22	.24	.49	1.00

individual who purchased Colonial/Early American being classified as such is only .12 or less than the probability of her being assigned to any of the other groups. These variables are most clearly able to differentiate Spanish/ Mediterranean as almost half of these individuals are classified correctly.

The fifteen life-style variables do a much better job of discriminating among the four groups than the demographic factors. From Table 24 we can see that the number of hits is increased to 206 or 39.6% of the total. This is primarily due to the ability of these variables to properly classify purchasers of the Colonial/Early American style. The probability of correctly assigning these individuals has been increased from .12 in the previous case to .40. Some decrease is encountered in the assignment of the Contemporary group but the Provincial and Spanish/Mediterranean groupings improved slightly.

The best discrimination is obtained if the two sets of variables are combined and separation is based on all twenty-one factors. The total number of hits is increased to 217 out of 520 or 41.7% (Table 25). The probability of the individual being assigned to the proper group ranges from a low of .37 for Colonial/Early American to a high of .46 for Spanish/Mediterranean. This range is much narrower than for either of the other two cases so the probability of

Table 24. Raw data and normalized confusion matrix for fifteen life-style factors related to style of furniture purchased.

a) Raw data matrix

	Predicted				
Actual	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean	Total
Colonial/ Early American	68	30	39	35	172
Provincial	10	31	16	18	75
Contemporary	56	33	88	59	236
Spanish/ Mediterranean	5	6	7	19	37
Total	139	100	150	131	520

Total hits = 206, Percent hits = 39.6%

b) Normalized matrix

	Predicted				
Actual	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean	Total
Colonial/ Early American	.40	.17	.23	.20	1.00
Provincial	.13	.41	.21	.25	1.00
Contemporary	.24	.14	.37	.25	1.00
Spanish/ Mediterranean	.14	.16	.19	.51	1.00

Table 25. Raw data and normalized confusion matrix for twenty-one life-style and demographic factors related to style of furniture purchased.

a) Raw data matrix

	Predicted				
Actual	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean	Total
Colonial/ Early American	64	38	40	30	172
Provincial	10	34	17	14	75
Contemporary	52	38	102	44	236
Spanish/ Mediterranean	6	8	6	17	37
Total	132	118	165	105	520

Total hits = 217, Percent hits = 41.7%

b) Normalized matrix

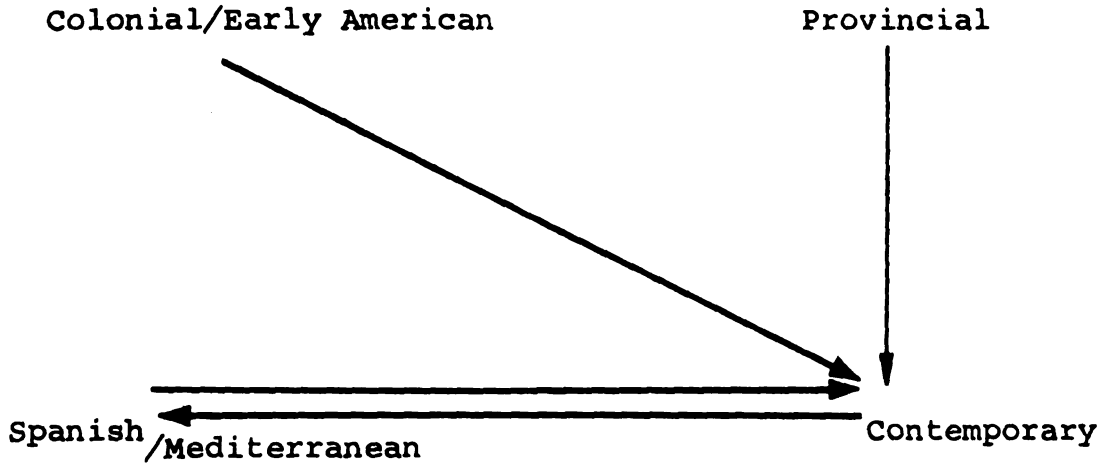
	Predicted				
Actual	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean	Total
Colonial/ Early American	.37	.22	.23	.18	1.00
Provincial	.13	.45	.23	.19	1.00
Contemporary	.22	.16	.43	.19	1.00
Spanish/ Mediterranean	.16	.22	.16	.46	1.00

an individual being properly classified in each of the four groups is approximately equal.

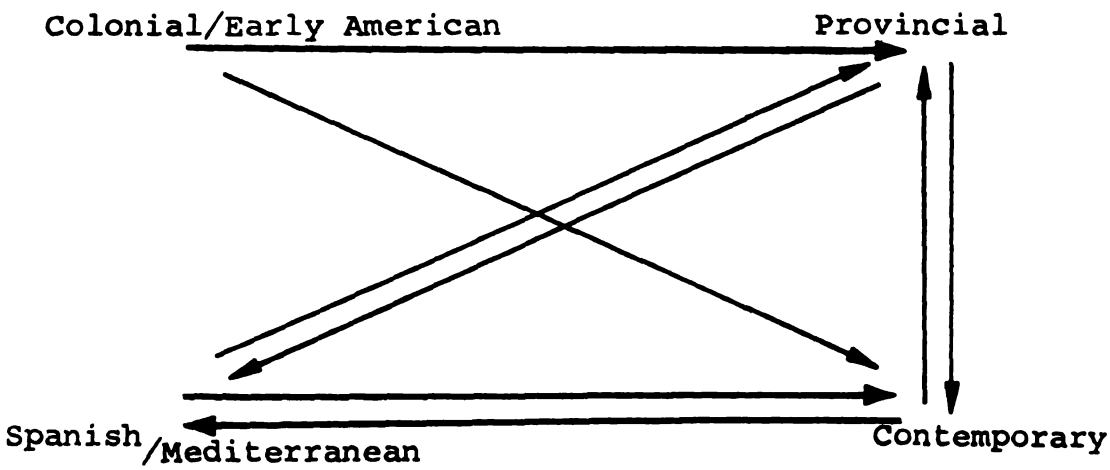
To give us some idea of the groups that are most distinct from each other we can use association diagrams for each of the variable sets. Figures 7, 8 and 9 illustrate the direction of most likely misclassification for each set. Each figure has two diagrams, the upper showing the direction of misclassification for the largest off-diagonal entry in each row of Tables 23, 24 and 25 and the lower showing the direction for the two largest off-diagonal entries in each table.

From Figure 7 we can see that the groups most clearly differentiated by the demographic factors are Colonial/Early American and Spanish/Mediterranean. This means that individuals who purchased Colonial/Early American furniture are least likely to be misclassified or confused with those who purchased Spanish/Mediterranean and inversely. Those most likely to be confused are purchasers of Contemporary and Spanish/Mediterranean as indicated by the reciprocal arrows in the largest misclassification diagram. Purchasers of Colonial/Early American and Provincial are also most likely to be confused with Contemporary but the reverse is not true to the same degree.

Figure 8 illustrates the situation when discriminating by means of the life-style factors. Here the clearest

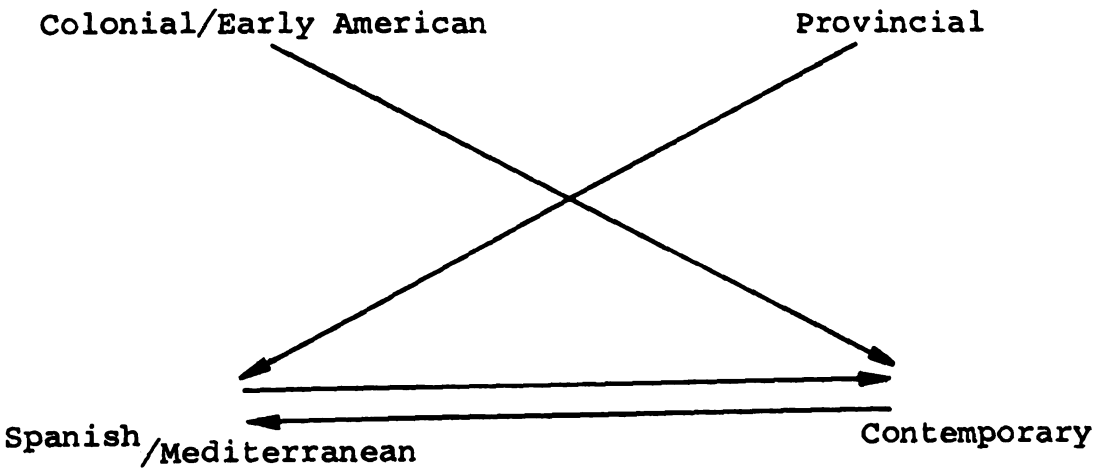


a) Largest Misclassification

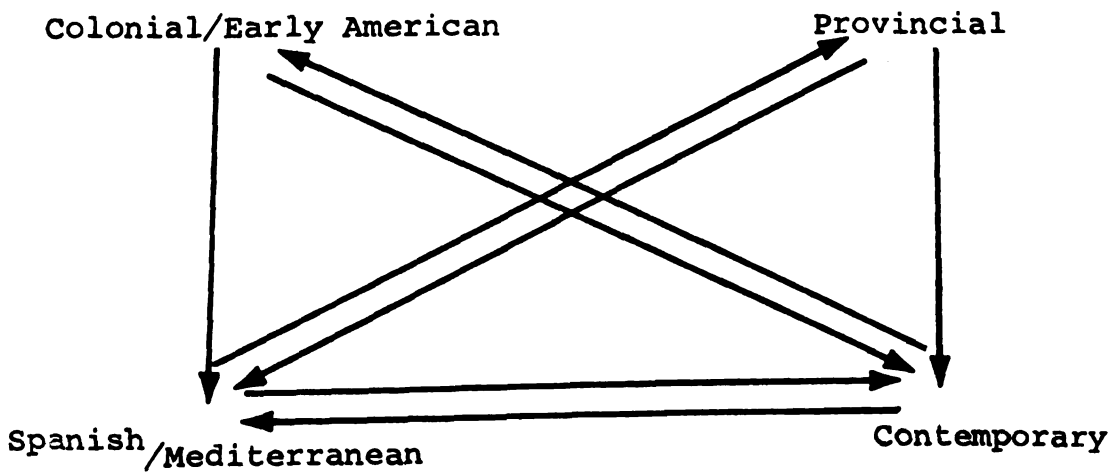


b) Two Largest Misclassifications

Figure 7. Association diagram for six demographic factors related to style of furniture purchased.



a) Largest Misclassification



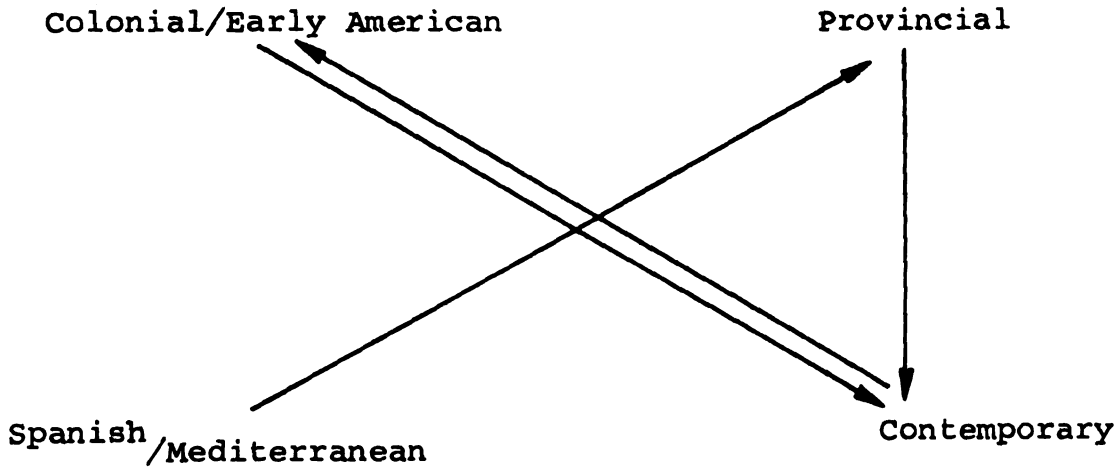
b) Two Largest Misclassifications

Figure 8. Association diagram for fifteen life-style factors related to style of furniture purchased.

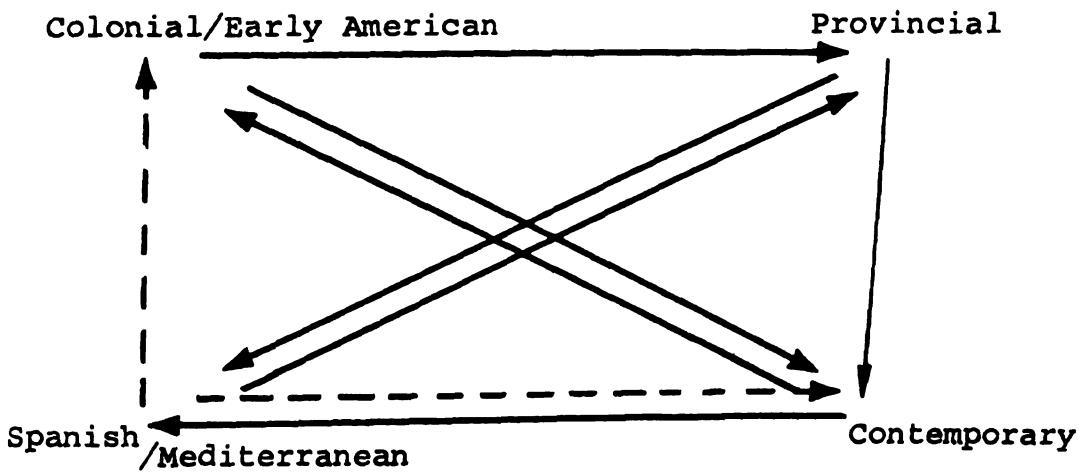
separation is between Colonial/Early American and Provincial but Spanish/Mediterranean and Contemporary are still the groups most easily confused with each other. All other relationships are reciprocal except that Colonial/Early American purchasers tend to be disproportionately associated with Spanish/Mediterranean and Provincial with Contemporary.

The association diagram for the combined set of variables is shown in Figure 9. As was the case for the demographic factors alone, the clearest separation is between the Colonial/Early American and Spanish/Mediterranean style groupings. The same reciprocal relationships exist as with the discrimination based upon life-style factors but purchasers of Provincial styled furniture tend to be associated with Contemporary even though Colonial/Early American purchasers are more likely to be misclassified as Provincial buyers than those preferring Contemporary.

Table 26 enables us to obtain some insight into the characteristics of individuals in each group by analyzing differences between their mean scores. For variables one to six or the demographic variables, high mean scores indicate a greater degree of association with the variable. For example, the score of 3.80 on education of household head for respondents purchasing Provincial styled furniture indicates that they or their spouses tend to have received more formal



a) Largest Misclassification



b) Two Largest Misclassifications

Figure 9. Association diagram for twenty-one life-style and demographic factors related to style of furniture purchased.

*The pair of dotted lines denotes a tie.

Table 26. Table of comparative means for four furniture style categories and twenty-one demographic and life-style variables.

	Variable	Colonial/ Early American	Provincial	Contemporary	Spanish/ Mediterranean
1.	Marital status	2.08	2.12	2.02	2.03
2.	Family size	2.05	1.84	2.00	2.16
3.	Age of household head	3.05	3.20	3.00	2.94
4.	Education of household head	3.58	3.80	3.50	3.49
5.	Own/rent present home	1.09	1.09	1.08	1.14
6.	Total family income*	3.76	4.15	3.65	4.32
7.	Fashion conscious*	1.69	1.63	1.74	1.46
8.	Poor housekeeper	- .71	- .78	- .87	- .88
9.	Careful shopper	1.79	1.92	1.90	1.93
10.	Disinterest in community affairs	-1.90	-1.89	-1.97	-1.85
11.	Appreciation of the arts	2.09	1.97	2.18	2.03
12.	Sports spectator*	2.59	2.87	2.94	2.74
13.	Do-it-yourself homemaker	1.79	2.11	1.94	2.09
14.	Conservative shopper	- .06	- .08	- .06	- .08
15.	Child oriented	1.01	1.09	1.07	1.12
16.	Modern thinker	-1.56	-1.60	-1.58	-1.62
17.	Energetic	.73	.65	.64	.55
18.	Weight conscious	1.97	1.87	2.02	1.84
19.	Sports participant	2.18	2.18	2.32	2.05
20.	Socialite*	1.76	1.58	1.88	1.68
21.	Self-centered	- .25	- .27	- .26	- .34

*Means are significantly different at .10 level.

education than respondents who prefer either of the other style categories. Variables seven to twenty-one or the life style variables, on the other hand, are interpreted so that lower absolute values for the mean scores indicate a high degree of association with the variable, as previously explained when discussing Table 21.

An analysis of the differences between means in Table 26 produces the following group profiles:

Colonial/Early American

Respondents who purchase furniture in this category tend to have a relatively low total family income averaging from $8000 to $10,000. For the most part, they are not overly fashion conscious, tend to be poor housekeepers and exhibit very price conscious shopping behavior. Their main interests are their children and sports with very little enthusiasm shown for the arts, community affairs or social events and activities.

Provincial

These respondents are, on the average, older, better educated and tend to have fewer children presently living at home than individuals preferring either of the other style categories. They appear to exhibit a definite interest in the arts but very little for do-it-yourself projects around the house. Entertaining and other social activities are an

important part of their way of life so they show some concern about their appearance, particularly their weight.

Contemporary

Respondents who purchased Contemporary styled furniture are very closely associated with those who prefer Colonial/Early American in that they tend to have a low average total family income and show very little interest in being considered fashionable. They also seem to indicate very little interest in community affairs, the arts, sports or social activities. In fact, this group exhibits no clear distinction on any of these factors. In general, they appear to be very average, expressing no strong desires and content to go along with the crowd while purchasing furniture primarily for its functional rather than its aesthetic value.

Spanish/Mediterranean

Purchasers of Spanish/Mediterranean furniture, in the main, are younger, generally under 35, more energetic and more affluent than individuals in any of the other categories. Fashion appears to be extremely important to them and they engage in diet programs and active sports to maintain their physical appearance. Their interests include the arts, social activities and the community in which they live. They appear to be quite outgoing and, in general, portray an image of what is commonly termed "young moderns."

This analysis of group differences can be made as extensive as desired by the researcher. In this case with only four groups it is relatively easy to identify the major group characteristics for each category. If more groups are involved the association diagrams of Figure 9 can be used to pick out the pairs of groups connected by fewest arrows. These groups are the most widely separated and pair-wise comparison between them gives a good profile of group characteristics while reducing the total number of comparisons to a manageable size. To illustrate this procedure, our data in Figure 9 indicate that the most widely separated groups are as follows:

a) Colonial/Early American compared with Spanish/ Mediterranean.

b) Colonial/Early American compared with Provincial.

c) Provincial compared with Contemporary.

The means for each of these combinations can be compared to obtain group profiles similar to those we have already presented for each of the four furniture style categories.

CHAPTER VI

SUMMARY AND CONCLUSIONS

This study has attempted to provide some insight into the characteristics of consumers of household furniture and to see how well these characteristics can be used to predict their market behavior. Rather than restricting the analysis to standard demographic variables such as age, income, etc., another dimension has been added, that of life-style factors which define the consumers' interests, opinions and attitudes concerning the way they live.

These factors are derived by subjecting a series of eighty questions from a mail questionnaire to factor analysis. This procedure has identified a set of fifteen well-defined factors which cover a range of areas related to everyday family life.

To test the ability of these variables to predict consumer market behavior, we have attempted to discriminate among groups of individuals who have demonstrated certain behavior in regards to:

1) The type of retail outlet at which their last major furniture purchase was made.
2) The styling characteristics of this last major purchase.

In each case, three runs have been made using different types and combinations of variables to see which set gives the best separation among groups. These sets consist of:

1) A series of six demographic variables.
2) The set of fifteen life-style variables resulting from the factor analysis.
3) The combination of twenty-one variables.

For the first question relating to market behavior, the set of fifteen life-style variables gives the best separation between the groups. These factors are able to correctly classify over 63 percent of the respondents who made their last purchase at either a department store or a furniture store. This is opposed to 56 percent and 60 percent for the other two sets of variables.

For the question relating to the style of their particular purchase, respondents indicated whether the item can be classified as Colonial/Early American, Provincial, Contemporary or Spanish/Mediterranean. In this case the combined set of twenty-one variables gives the best discrimination, correctly classifying almost 42 percent of the respondents. This is opposed to 33 percent for the demographic variables alone and 40 percent for the life-style variables alone.

From these results we can conclude that

1) Consumers do live according to certain patterns of behavior that can be measured and identified.

2) These behavior patterns or life-style factors have greater significance than the demographic variables in being able to predict market behavior from a practical standpoint.

The factors identified and used in this study are by no means inclusive of all aspects of consumer life-styles. Many other components of living behavior can be developed with other sets of questions and many of these may exhibit greater predictive value than those used here. A long term trial and error procedure would be required for development of the optimum set but the results of this study indicate that this may be a worthwhile direction for industrial market research to take to get a more complete picture of the people who purchase and use their products.

Although the results of the discriminatory analysis indicate that the life-style factors have greater predictive ability than the demographic variables, they still lack a great deal from being able to perfectly discriminate among the various market segments. Developing other, stronger variables is one way of improving the overall performance but there are indications that stratifying the population by age, income level or other means will also give a better discrimination. In the pretest conducted with wives of staff and faculty members within the Natural Resources Building of Michigan State University, the life-style factors alone

correctly classified over 80 percent of the respondents as to the style category of their last major purchase. Admittedly this sample size was much smaller but an improvement of over 40 percent in predictive ability can be considered quite significant. The explanatory capabilities of the variables certainly appear to be much greater when the population is relatively homogeneous in income and occupation but differing in their attitudes, opinions and preferences for particular styles of furniture.

This study represents only one appraoch to the marketing problems of the furniture industry. With this type of information about their customers, they can promote and direct their products towards particular market segments. This will enable them to push their products through the distribution channels more efficiently and effectively.

Another, and perhaps more important, aspect of the furniture industry's marketing problems is to overcome the traditionist attitude of many of the larger manufacturers insofar as styling or design is concerned. They produce what they think the public should have or variations on styles that have been popular for decades and even centuries. O'Hanlon (29) quotes the chairman of a large company as stating:

> There is really nothing new in furniture design. It's like a stack of sheet music. You play your way through and then start all over again.

This statement has been very true for many years. The extent that this philosophy has permeated the industry is illustrated by a quote from the same article by an executive of the Kroehler Company: "If someone came to me with an original design, no matter how beautiful, I'd turn him down." To support their point, these people point to the recent success of "instant antiques" or furniture that is artificially distressed in the factory to give it the appearance of grandmother's favorite table (29).

To date this philosophy has worked as the public has purchased their product and many companies have prospered. Perhaps this has been because furniture is a necessity to every family and many consumers have been forced to make a selection from the limited lines available. Now with consumer disposable income expanding beyond the necessity level, the failure of the industry to keep pace with other consumer goods industries indicates its failure to satisfy consumer tastes and needs.

The fact that today's consumers are ready to accept completely new designs not linked to tradition is exemplified by the success of Herman Miller Inc. of Zeeland, Michigan. This is a company that has expanded by ignoring traditional tastes and designing their products to meet a human need. Another indication of this is the rapid expansion of plastics

into furniture construction, where tremendous growth is predicted not only in applications to simulate traditional wood panels but in the use of plastics as plastics.

Research in this area to provide designs more acceptable to today's modern consumer will create a greater desire on her part to buy more furniture.

The combination of the market pull developed by providing products more desirable to the consumer and the push created by manufacturers directing their products and appeals to appropriate market segments should stimulate the demand for household furniture considerably and enable the industry to maintain or increase its present share of consumer disposable income.

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APPENDICES

APPENDIX I

The questionnaire used to obtain information on consumer life-styles and market behavior.

MICHIGAN STATE UNIVERSITY EAST LANSING • MICHIGAN 48823

DEPARTMENT OF FORESTRY

February 24, 1969

Dear Homemaker:

I hope you will help us with a study we are doing at Michigan State University.

We are asking a representative sample of residents of Michigan to send us information regarding themselves and their purchases and ownership of household furniture. In this way, we hope to relate behavior regarding household furniture to the living patterns of various groups of people. All information that you send to us will be kept strictly confidential and no participating individuals will ever be identified.

This study is being made by Michigan State as part of its research program. It is not sponsored by any business firm or any political organization. You will never be asked to buy anything as a result of this study, nor will you be asked to make any contribution of any kind.

I hope that you will fill out the questionnaire and send it back to us as soon as conveniently possible in the self-addressed envelope which is enclosed. You are very important to us in this study.

Something else which may be of interest to you is the work being done by the Cooperative Extension Service of Michigan State University. They publish a number of informative publications, most of which are available at no cost. The enclosed booklet has a full listing of these reports, and you may use the order blank at the back to obtain those of interest to you. I particularly recommend "The Selection of Upholstered Furniture" and "Wood Furniture" listed under the Home Furnishings Section.

If you have any questions regarding the survey, please call me at the University, 353-0646, and I shall be glad to answer them.

Thanks very much.

Walter Good

Walter S. Good, Graduate Research Assistant
Department of Forestry - Wood Science

Dear Homemaker:

The following is a series of questions relating to living patterns and household furniture preferences. Please mark the answer to each question clearly with either a (✓) or an (X) in the appropriate box at the right hand side of the page. Also be certain that only one answer per question is checked and that all questions are answered. Ignore the numbers beside each square as they are used only for coding the final information.

A.

1. Present marital Status:
   - Single ☐1 (6)
   - Married ☐2
   - Widowed ☐3
   - Divorced ☐4
   - Other ☐5

2. Family size: (presently living at home)
   - 1 or 2 members ☐1 (7)
   - 3 or 4 members ☐2
   - 5 or more members ☐3

3. Age of household head:
   - 24 and younger ☐1 (8)
   - 25 to 34 ☐2
   - 35 to 49 ☐3
   - 50 to 64 ☐4
   - 65 and older ☐5

4. Education of household head:
   - Grade school or less ☐1 (9)
   - Some high school ☐2
   - Graduate high school ☐3
   - Some college ☐4
   - Graduate college ☐5

5. Own present home ☐1 (10)
   Rent present home ☐2

6. Total family income - 1968:
   - Under $5,000 ☐1 (11)
   - $5,000 - 7,999 ☐2
   - $8,000 - 9,999 ☐3
   - $10,000 - 14,999 ☐4
   - $15,000 - 19,999 ☐5
   - Over $20,000 ☐6

B.

The questions in this section are concerned with the last major (over $50.00) furniture item or set that you purchased for your home. If more than one item or set was purchased at the same time, please relate your answers to only one of them.

1. Which of the following items or sets was this particular purchase:
   - Living room set ☐1 (12)
   - Sofa or divan ☐2
   - Lounge or occasional chair ☐3
   - Dinette-kitchen set ☐4
   - End or coffee tables ☐5
   - Bedroom set ☐6
   - Chest, dresser, etc. ☐7
   - Other ☐8

2. At what type of store or outlet was this purchase made:
   - Furniture department of department store ☐1 (13)
   - Discount store ☐2
   - Furniture store ☐3
   - Mail order house ☐4
   - Interior design shop ☐5

Wholesale outlet ☐6
Other ☐7

3. Of the attached diagrams, which page has a drawing which best represents the styling features of this item or set:

Page I, Colonial-Early American ☐1 (14)
Page II, Provincial ☐2
Page III, Contemporary ☐3
Page IV, Spanish-Mediterranean ☐4
Other ☐ Please explain:_____

4. Approximately how long ago was this purchase made:

Within last 12 months ☐1 (15)
1 - 2 years ☐2
2 - 5 years ☐3
Over 5 years ☐4

5. If you were considering the purchase of this item or set again, which page best represents the styling features that you would select now:

Page I, Colonial-Early American ☐1 (16)
Page II, Provincial ☐2
Page III, Contemporary ☐3
Page IV, Spanish-Mediterranean ☐4
Other ☐ Please explain:_____

C.

The following questions may appear to be very unrelated to household furniture, but they are essential for establishing living patterns. Please try to answer them as honestly as possible and make certain that all questions are answered. Indicate by your response the extent of your agreement with the statement or how well you feel it applies to you as indicated by the scale below:

1. Strongly agree or definitely applies
2. Agree or applies
3. Uncertain
4. Disagree or does not apply
5. Strongly disagree or definitely does not apply

	Agree		Uncertain		Disagree	
1. I often redecorate my house or apartment.	☐1	☐2	☐3	☐4	☐5	(17)
2. I really enjoy most forms of housework.	☐1	☐2	☐3	☐4	☐5	(18)
3. I go to the women's club, church ladies' group, or some other women's group which meets regularly.	☐1	☐2	☐3	☐4	☐5	(19)
4. When I find a coupon in the paper, I clip it and redeem it the next time I go shopping.	☐1	☐2	☐3	☐4	☐5	(20)
5. People should spend a lot of time with their children talking about their activities, friends and problems.	☐1	☐2	☐3	☐4	☐5	(21)
6. I enjoy going to concerts.	☐1	☐2	☐3	☐4	☐5	(22)
7. I definitely watch what I eat to keep my weight down.	☐1	☐2	☐3	☐4	☐5	(23)
8. I often wonder where others get all the energy they seem to have.	☐1	☐2	☐3	☐4	☐5	(24)

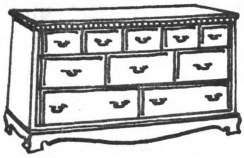
	Agree		Uncertain		Disagree	
9. I try to buy things that represent good value for my money.	☐1	☐2	☐3	☐4	☐5	(25)
10. I have a good deal of respect for tradition.	☐1	☐2	☐3	☐4	☐5	(26)
11. Looking after children really demands too much of me.	☐1	☐2	☐3	☐4	☐5	(27)
12. One of my favorite community activities is working with boys and girls in Scouting or other group activities.	☐1	☐2	☐3	☐4	☐5	(28)
13. I was active in sports when I was in school.	☐1	☐2	☐3	☐4	☐5	(29)
14. I nearly always wear nail polish.	☐1	☐2	☐3	☐4	☐5	(30)
15. I enjoy spending leisure time in museums.	☐1	☐2	☐3	☐4	☐5	(31)
16. As a rule, I don't buy new products until I hear something about them from people who have tried them.	☐1	☐2	☐3	☐4	☐5	(32)
17. I shop for specials.	☐1	☐2	☐3	☐4	☐5	(33)
18. My husband compliments me on the way I run the house.	☐1	☐2	☐3	☐4	☐5	(34)
19. I enjoy trying the latest style in hair-do's.	☐1	☐2	☐3	☐4	☐5	(35)
20. When children are ill in bed, parents should drop most everything else in order to see to their comfort.	☐1	☐2	☐3	☐4	☐5	(36)
21. I have gone on a strict diet to control my weight one or more times.	☐1	☐2	☐3	☐4	☐5	(37)
22. I have helped to collect money for the Red Cross, United Fund or March of Dimes.	☐1	☐2	☐3	☐4	☐5	(38)
23. I dislike any changes or interference with established ways of doing things.	☐1	☐2	☐3	☐4	☐5	(39)
24. Parents should regularly visit their children's school and talk with their teacher.	☐1	☐2	☐3	☐4	☐5	(40)
25. I enjoy making some of my own clothes.	☐1	☐2	☐3	☐4	☐5	(41)
26. I am able to work for long periods of time without feeling tired.	☐1	☐2	☐3	☐4	☐5	(42)
27. I go out to lunch with my friends quite often.	☐1	☐2	☐3	☐4	☐5	(43)
28. I take a keen interest in politics.	☐1	☐2	☐3	☐4	☐5	(44)
29. I hate to throw things away even though they are of little use anymore.	☐1	☐2	☐3	☐4	☐5	(45)
30. Parents should take a lot of time and effort to teach their children good habits.	☐1	☐2	☐3	☐4	☐5	(46)
31. I read the sports section of the paper.	☐1	☐2	☐3	☐4	☐5	(47)
32. I enjoy fixing up and repainting old things.	☐1	☐2	☐3	☐4	☐5	(48)

	Agree		Uncertain		Disagree	
33. I take advantage of low calorie foods to help me and/or my family keep our weight down.	☐1	☐2	☐3	☐4	☐5	(49)
34. I often buy products or brands just on impluse.	☐1	☐2	☐3	☐4	☐5	(50)
35. I use eye shadow or eye liner three times a week or more.	☐1	☐2	☐3	☐4	☐5	(51)
36. I used to bowl, play tennis, golf, or engage in other active sports quite often.	☐1	☐2	☐3	☐4	☐5	(52)
37. I study the food ads each week so I can make the best buy.	☐1	☐2	☐3	☐4	☐5	(53)
38. I usually have at least one outfit that is the very latest style.	☐1	☐2	☐3	☐4	☐5	(54)
39. I like to work in community projects.	☐1	☐2	☐3	☐4	☐5	(55)
40. I really enjoy cleaning my house.	☐1	☐2	☐3	☐4	☐5	(56)
41. Fashion in clothes is more important than comfort to me.	☐1	☐2	☐3	☐4	☐5	(57)
42. Once I have made a choice on brands, I am likely to use it regularly without trying any others.	☐1	☐2	☐3	☐4	☐5	(58)
43. I have a lot of energy.	☐1	☐2	☐3	☐4	☐5	(59)
44. I consider myself very good at sewing and/or knitting.	☐1	☐2	☐3	☐4	☐5	(60)
45. I generally prefer classical to the more popular forms of music.	☐1	☐2	☐3	☐4	☐5	(61)
46. Parents should try to arrange their home for their children's convenience.	☐1	☐2	☐3	☐4	☐5	(62)
47. We visit with friends in their homes a great deal.	☐1	☐2	☐3	☐4	☐5	(63)
48. I often find myself being critical of the younger generation.	☐1	☐2	☐3	☐4	☐5	(64)
49. I feel embarrassed and uncomfortable when I am asked to entertain strangers.	☐1	☐2	☐3	☐4	☐5	(65)
50. Children bring a husband and wife closer to each other.	☐1	☐2	☐3	☐4	☐5	(66)
51. We generally go out for dinner at least once a week.	☐1	☐2	☐3	☐4	☐5	(67)
52. I enjoy listening to classical records.	☐1	☐2	☐3	☐4	☐5	(68)
53. I get great satisfaction from experimenting with new recipes.	☐1	☐2	☐3	☐4	☐5	(69)
54. I like to watch or listen to baseball or football games.	☐1	☐2	☐3	☐4	☐5	(70)
55. I have several different shades of lipstick to go with different dresses.	☐1	☐2	☐3	☐4	☐5	(71)

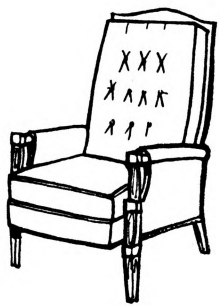
	Agree		Uncertain		Disagree	
56. I watch the advertisements for announcements of sales.	☐1	☐2	☐3	☐4	☐5	(7)
57. I am an active member of more than one service organization.	☐1	☐2	☐3	☐4	☐5	(8)
58. My idea of house cleaning is "once over lightly".	☐1	☐2	☐3	☐4	☐5	(9)
59. Dressing fashionably is an important part of my life.	☐1	☐2	☐3	☐4	☐5	(10)
60. Parents should be active in the PTA.	☐1	☐2	☐3	☐4	☐5	(11)
61. I enjoy trying new products before other people do.	☐1	☐2	☐3	☐4	☐5	(12)
62. I presently own a wig, fall or other hairpiece.	☐1	☐2	☐3	☐4	☐5	(13)
63. I have copied the way people dress on television or in magazines.	☐1	☐2	☐3	☐4	☐5	(14)
64. I follow the baseball results throughout the season.	☐1	☐2	☐3	☐4	☐5	(15)
65. One of the duties of American women is to take an active part in community activities.	☐1	☐2	☐3	☐4	☐5	(16)
66. I dress for comfort, not for fashion.	☐1	☐2	☐3	☐4	☐5	(17)
67. I often find myself thinking about the good old days.	☐1	☐2	☐3	☐4	☐5	(18)
68. I enjoy going through an art gallery.	☐1	☐2	☐3	☐4	☐5	(19)
69. I think many young parents today do not know how to bring up children properly.	☐1	☐2	☐3	☐4	☐5	(20)
70. I have personally worked in a public campaign for a candidate or an issue.	☐1	☐2	☐3	☐4	☐5	(21)
71. I consider myself relatively set in my ways.	☐1	☐2	☐3	☐4	☐5	(22)
72. I keep away from brands I've never heard of.	☐1	☐2	☐3	☐4	☐5	(23)
73. Keeping my home nice satisfies my creative needs.	☐1	☐2	☐3	☐4	☐5	(24)
74. To me, half the fun of shopping is trying new things.	☐1	☐2	☐3	☐4	☐5	(25)
75. Women should work for a service organization or hospital on a regular basis.	☐1	☐2	☐3	☐4	☐5	(26)
76. I seldom buy things on impulse.	☐1	☐2	☐3	☐4	☐5	(27)
77. I entertain frequently in my home.	☐1	☐2	☐3	☐4	☐5	(28)
78. I feel very uneasy when other peoples' children climb on my furniture.	☐1	☐2	☐3	☐4	☐5	(29)
79. I like to organize community projects.	☐1	☐2	☐3	☐4	☐5	(30)
80. I go bowling often.	☐1	☐2	☐3	☐4	☐5	(31)

Thank you again for your patience and kind cooperation.

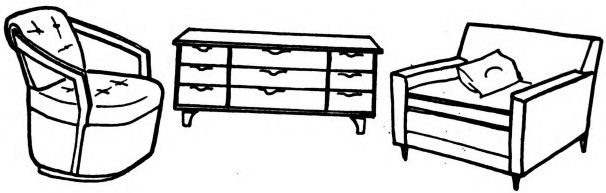
I COLONIAL - EARLY AMERICAN

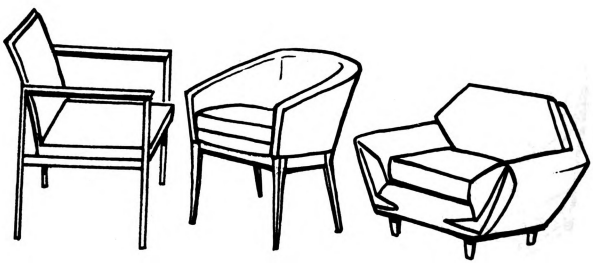


II PROVINCIAL

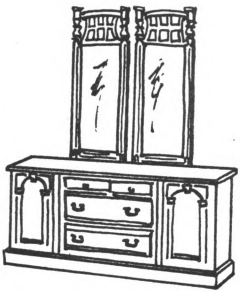


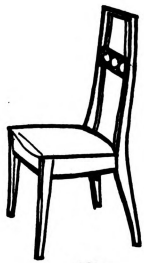
III CONTEMPORARY

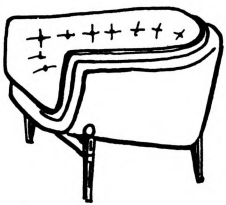


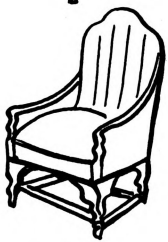


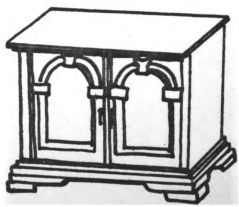
IV SPANISH – MEDITERRANEAN











APPENDIX II

Frequency distribution of respondents' answers to parts A and B of the questionnaire.

DATA SET

TABLE NO. 1 A1
Marital Status

CODE	1	2	3	4	5
FREQUENCY	8	488	14	9	1
RAW PERCENT	1.54	93.85	2.69	1.73	.19

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	2.052	.355	>20

TABLE NO. 2 A2
Type Family

CODE	1	2	3
FREQUENCY	146	226	148
RAW PERCENT	28.08	43.46	28.46

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	2.004	.752	>20

TABLE NO. 3 A3
Age

CODE	1	2	3	4	5
FREQUENCY	27	117	212	136	28
RAW PERCENT	5.19	22.50	40.77	26.15	5.38

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	3.040	.953	>20

TABLE NO. 4 A4
Education

CODE	1	2	3	4	5
FREQUENCY	23	69	159	127	142
RAW PERCENT	4.42	13.27	30.58	24.42	27.31

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	3.569	1.150	>20

TABLE NO. 5 A5

CODE 1 2

FREQUENCY 473 47

RAW PERCENT 90.99 9.04

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	1.090	.287	520

TABLE NO. 6 A6

INCOME

CODE 1 2 3 4 5 6

FREQUENCY 23 59 87 226 77 48

RAW PERCENT 4.42 11.35 16.73 43.46 14.81 9.23

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	3.806	1.224	520

TABLE NO. 7 B1

CODE 1 2 3 4 5 6 7 8

FREQUENCY 75 70 94 46 28 80 21 97

RAW PERCENT 14.42 13.46 18.08 8.85 5.38 15.38 4.04 18.65

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	4.312	2.451	520

TABLE NO. 8 B2

CODE 1 2 3 4 5 6 7

FREQUENCY 154 3 423 3 15 2 20

RAW PERCENT 29.62 .58 82.12 .58 2.88 .38 3.85

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	2.631	1.351	520

TABLE NO. 5 A5
Own/Rent Home

CODE	1	2
FREQUENCY	473	47
RAW PERCENT	90.99	9.04

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	1.090	.287	520

TABLE NO. 6 A6
Income

CODE	1	2	3	4	5	6
FREQUENCY	23	59	87	226	77	48
RAW PERCENT	4.42	11.35	16.73	43.46	14.81	9.23

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	3.806	1.224	520

TABLE NO. 7 B1

CODE	1	2	3	4	5	6	7	8
FREQUENCY	75	79	94	46	28	80	21	97
RAW PERCENT	14.42	15.19	18.08	8.85	5.38	15.38	4.04	18.65

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	4.312	2.451	520

TABLE NO. 8 B2

CODE	1	2	3	4	5	6	7
FREQUENCY	154	3	323	3	15	2	20
RAW PERCENT	29.62	.58	62.12	.58	2.88	.38	3.85

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	2.631	1.351	520

FREQUENCY DISTRIBUTION QUESTIONS A1-A6,B1-B5 WALTER GOOD APRIL 1969 DATA SET 1

TABLE NO. 9 B3

CODE	1	2	3	4
FREQUENCY	172	75	236	37
RAW PERCENT	33.08	14.42	45.38	7.12

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	2.265	.999	520

TABLE NO. 10 B4

CODE	1	2	3	4
FREQUENCY	236	127	122	35
RAW PERCENT	45.38	24.42	23.46	6.73

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	1.915	.975	520

TABLE NO. 11 B5

CODE	1	2	3	4
FREQUENCY	178	83	200	59
RAW PERCENT	34.23	15.96	38.46	11.35

CODE	BLANK	OTHER	MEAN	S.D.	OBSERVATIONS
FREQUENCY	0	0	2.269	1.053	520

APPENDIX III

Correlation coefficients between the eighty variables in part C of the questionnaire.

CISSR OVERLAY TAPE EXECUTIVE LOADED FROM MT(193)

GRAMS CURRENTLY AVAILABLE FROM THIS TAPE ARE

DATASTOR NUCROS PERCOUNT ACT ONEWAY IDCORR DAP1 DAP2 DAP22 CCRECODE

FACTORA TSSA GUTTMAN BMD05M AID PC MMPA FCC123 FACTORC SERIEL

SSA MARKOV1 MARKOV2 DISCRIM2

ISSR CONTROL CARD READS -- $ROUTINE,FACTOR A

LL MADE FOR ROUTINE FACTORA
FACTOR ANALYSIS ON QUESTIONS C1-C80
WALTER GOOD APRIL 1968
TA FORMAT

(16X,54F1.0/5X,26F1.0)

ANS.

1	3.0635	2	2.3250	3	3.1173	4	3.0462	5	1.6519	6	2.9731
7	2.7462	8	2.9038	9	1.2269	10	2.0808	11	4.1846	12	3.5404
13	3.0135	14	3.8135	15	3.2192	16	2.8846	17	2.3269	18	2.4327
19	3.1769	20	2.2596	21	3.0327	22	2.4962	23	3.3981	24	1.8577
25	2.6577	26	2.7231	27	3.5558	28	2.9805	29	3.0192	30	1.3962
31	3.5308	32	2.6154	33	2.9154	34	3.5231	35	3.6288	36	2.9308
37	2.6731	38	2.6731	39	3.0885	40	2.5135	41	4.0962	42	2.8231
43	2.7596	44	2.9981	45	3.1558	46	3.3654	47	2.8962	48	3.1288
49	3.3135	50	2.3077	51	3.3558	52	2.8404	53	2.3538	54	3.0981

55	2.7942	56	2,2538	57	3:7635	58	4,0442	59	3,2404	60	1.9308
61	3,3269	62	3,7000	63	4,0019	64	3,5442	65	2,6250	66	2.3904
67	3.2904	68	2,8212	69	2:6654	70	3,8365	71	2,7212	72	3.1269
73	2.4327	74	3,1346	75	3:1038	76	2,7827	77	2,7750	78	2.4268
79	4.1250	80	4,1346								

ARD DEVIATIONS,

1	1.3322	2	1,3068	3	1:6454	4	1,3776	5	0,9009	6	1.4207
7	1.3159	8	1,3862	9	0:5568	10	1,0290	11	1,0491	12	1.2899
13	1.5535	14	1,4216	15	1:3309	16	1,3972	17	1,3012	18	1.2524
19	1.3642	20	1,1214	21	1:6528	22	1,5872	23	1,2547	24	1.0033
25	1.5927	26	1,2680	27	1:3304	28	1,2664	29	1,4844	30	0.6627
31	1.4395	32	1,3916	33	1:3869	34	1,2479	35	1,5905	36	1.5289
37	1.4441	38	1,3576	39	1:2263	40	1,3155	41	1,0088	42	1.2933
43	1.1985	44	1,4800	45	1.3731	46	1,1423	47	1,2923	48	1.2060
49	1.3038	50	1,1757	51	1.4459	52	1,4262	53	1,2223	54	1.5541
55	1.5423	56	1,2592	57	1:3601	58	1,1077	59	1,2641	60	0.9722
61	1,2188	62	1,6439	63	1.2018	64	1,5248	65	1,0936	66	1.1315
67	1.3237	68	1,3618	69	1:2119	70	1,4312	71	1,1134	72	1.2707
73	1.2692	74	1,1657	75	1.1235	76	1,2484	77	1,2835	78	1.3078
79	1.0478	80	1,2392								

20 OBSERVATIONS FOR 80 VARIABLES.

TIONS SELECTED

```
 INPUT OPTION=  0
 COMMUNALITY OPTION=  0
 PRINCIPAL AXIS OR ROTATION=  0
 TYPE OF ROTATION=  2
 KIEL-WRIGLEY OPTION=  1
 NUMBER OF FACTORS TO ROTATE IF NOT KIEL-WRIGLEY=   15
 PRINT OPTION=  0
 EIGENVALUE THRESHHOLD=.0,000
```

ERCORRELATION MATRIX.

	1	2	3	4	5	6	7	8	9	10
1	1.0000									
2	0.3019	1.0000								
3	0.1177	0.1146	1.0000							
4	-0.0079	0.0515	0.1020	1.0000						
5	0.0585	0.1369	0.0327	0.1199	1.0000					
6	-0.0905	-0.0823	0.1198	0.0006	-0.0148	1.0000				
7	0.0454	0.0893	0.1257	0.1316	-0.0161	0.1558	1.0000			
8	-0.0623	-0.0422	-0.0178	0.0789	0.0856	0.0114	-0.0260	1.0000		
9	0.0221	0.0889	0.0297	0.1618	0.0770	0.0879	0.1364	-0.0166	1.0000	
10	0.1786	0.1936	0.1262	0.1480	0.1382	0.0252	0.0961	0.1200	0.1325	1.0000
11	-0.0662	-0.1265	-0.0593	0.1085	-0.0948	0.0008	-0.0120	0.2119	-0.0454	-0.0566
12	0.0707	0.0384	0.2202	0.0130	0.1255	0.1496	0.0797	-0.0645	0.0140	0.1526
13	0.0758	0.0149	0.0152	-0.0219	0.0487	0.0080	0.0685	-0.0369	0.0543	0.0932
14	0.1718	0.1010	0.0422	0.0211	0.0364	0.0575	0.0939	0.0446	-0.0048	0.0511
15	-0.1478	-0.1714	0.0471	0.0301	-0.0278	0.3754	0.1767	-0.0219	0.0626	0.0559
16	0.1042	0.0922	-0.0142	0.0427	0.0598	-0.0326	-0.0944	0.1472	0.0065	0.1483
17	-0.0796	-0.0319	-0.0026	0.3649	0.1069	0.0297	0.0238	0.1081	0.1683	0.0521
18	0.1265	0.3171	0.0258	0.0564	0.0755	-0.0129	0.0876	-0.1621	0.1101	0.0341
19	0.1028	0.0638	-0.0478	-0.0248	0.1158	-0.0075	0.1257	-0.0368	0.1016	-0.0129
20	0.0392	0.0736	0.0356	0.0856	0.2113	0.0056	-0.0088	0.0569	0.0473	0.0902
21	-0.0455	-0.0530	0.0276	0.0357	0.0193	0.0200	0.3089	0.1525	-0.0039	0.0539
22	0.1070	0.0734	0.2067	0.0572	0.0455	0.1066	0.0465	0.0733	0.0489	0.1733
23	0.0355	0.0994	0.0612	0.1006	0.0154	-0.0986	0.0612	0.1514	-0.0440	0.1211
24	-0.0177	0.1042	-0.0400	0.0632	0.2324	0.0432	0.0134	0.0551	0.1026	0.0931
25	-0.0469	0.0239	0.0249	0.0712	0.0362	0.0546	0.0760	0.0025	0.0204	0.0133
26	0.1493	0.1065	-0.0167	-0.0378	-0.0204	-0.0266	0.0754	-0.3532	-0.0363	-0.0153
27	0.0636	0.0244	0.1090	-0.0119	-0.0632	0.0913	0.0443	-0.0951	0.0452	0.0122
28	-0.0007	-0.0779	0.0754	0.0653	0.0083	0.2115	0.1506	-0.0127	0.1128	0.1025

29	-0.0337	-0.0835	0.0101	0.1773	0.0223	-0.0061	0.0055	0.0869	0.0157	0.0053
30	0.0216	0.1289	0.0526	0.0895	0.2213	-0.0152	0.0560	0.0310	0.1889	0.1956
31	0.0767	0.1230	-0.0377	0.0167	-0.0414	0.0079	0.0711	0.0015	0.0657	0.0386
32	0.1573	0.1618	0.0777	0.0775	0.1080	0.1514	0.0632	-0.0431	0.0977	0.0566
33	0.0737	0.0162	0.0937	0.1087	0.0303	0.1940	0.4361	0.0658	0.0722	0.1422
34	0.0599	-0.0241	-0.0065	-0.0230	-0.0194	0.0145	0.0516	0.0969	-0.0684	-0.0149
35	0.0356	-0.0554	-0.0730	-0.0159	-0.0002	0.0398	0.0257	-0.0258	-0.0721	-0.0780
36	0.0862	0.0392	0.0216	-0.0286	0.0411	0.0071	0.0792	-0.0794	0.0546	0.0488
37	0.0888	0.1317	0.1100	0.4716	0.1343	0.0248	0.0798	0.0554	0.1616	0.2093
38	0.1316	0.1271	0.1170	0.0862	0.1161	0.0722	0.2011	-0.0351	0.0778	0.0781
39	0.0990	0.0697	0.3189	0.0511	0.1375	0.2045	0.0926	-0.0357	0.0185	0.2306
40	0.2788	0.7721	0.0530	0.0612	0.1735	-0.1511	0.0842	-0.0657	0.0903	0.2009
41	0.0441	-0.0368	-0.0080	-0.0129	-0.0013	0.0515	0.0923	-0.0498	-0.0594	-0.0186
42	0.0813	0.1353	-0.0146	-0.0364	0.1386	-0.1292	-0.0388	0.0731	-0.0190	0.0815
43	0.1493	0.1948	0.0845	0.0277	0.0650	-0.0286	0.0832	-0.4341	0.0472	0.0688
44	-0.0048	0.0620	0.0340	0.0444	0.0240	0.0741	0.0501	-0.0601	0.0612	0.0077
45	-0.0916	-0.0036	0.0762	-0.0069	-0.0526	0.4576	0.0517	-0.0517	0.0041	0.0170
46	0.0618	0.1420	0.1112	-0.0022	0.1722	0.0309	-0.0253	0.0671	0.0087	0.0829
47	0.1580	0.2318	0.1061	-0.0081	0.0416	0.0519	0.0625	-0.0775	0.0942	0.1307
48	0.0679	0.1772	0.0447	0.0404	-0.0154	-0.0743	0.0339	0.1339	-0.0550	0.1528
49	-0.0823	-0.0733	-0.0512	0.0819	-0.0004	-0.1377	-0.0354	0.2678	-0.0582	0.0213
50	0.0944	0.2441	0.0907	0.1005	0.2300	-0.0987	0.0356	0.0500	0.0667	0.0701
51	0.1001	-0.0001	0.0221	-0.1144	-0.0260	0.0487	0.0636	-0.0741	0.0024	0.0195
52	-0.0999	-0.0671	0.0727	-0.0207	-0.0732	0.6034	0.1055	-0.0068	0.0359	-0.0161
53	-0.0705	0.0737	0.1247	0.1182	0.0298	0.2070	0.2029	-0.0741	0.0742	0.0369
54	0.1391	0.1244	-0.0068	-0.0955	0.0216	0.0082	0.0893	-0.0054	-0.0079	0.0311
55	0.0503	0.0141	0.0747	0.0271	-0.0142	0.1765	0.1221	-0.1100	0.0678	0.0286
56	-0.0107	0.0282	0.1091	0.3957	0.1423	0.1210	0.1329	0.0547	0.0824	0.1460
57	0.0125	-0.0292	0.3862	0.0941	-0.0185	0.1490	-0.0185	-0.0529	-0.0028	0.1057
58	-0.1505	-0.4740	0.0035	0.0125	-0.0186	0.1095	-0.1308	0.0641	-0.1098	-0.0875

0.1781 0.0760 45.0757 0.1741 0.0000

	0.0663	-0.0147	0.0419	-0.0097	0.0566	0.0828	0.1719	-0.0757	0.0509	0.0176
60	0.0301	0.1630	0.1217	0.0569	0.2316	0.0752	0.1080	0.0735	0.1178	0.1671
61	0.0441	-0.0293	0.0451	0.1525	0.0318	0.1617	0.1249	0.0106	0.0210	-0.0103
62	0.0596	-0.0996	0.0393	-0.0397	0.0736	-0.0026	0.0368	-0.0068	0.0050	-0.0209
63	0.0432	-0.1363	-0.0594	-0.0001	0.0415	0.1296	0.1061	-0.0345	0.0741	-0.0172
64	0.1259	0.0666	-0.0017	-0.0037	0.0581	0.0014	0.1187	0.0229	0.0471	0.0664
65	0.0665	-0.0076	0.2318	0.1455	0.1330	0.2014	0.1116	0.0219	-0.0308	0.1653
66	0.0129	0.1002	-0.0194	0.0896	0.0541	-0.0640	-0.0510	0.0889	0.0670	0.1067
67	0.0615	0.1578	0.0435	0.0749	0.0541	-0.2085	-0.0151	0.2301	-0.0450	0.1720
68	-0.1294	-0.1640	0.0506	-0.0100	-0.0586	0.4657	0.1914	-0.0427	0.0459	-0.0089
69	0.0179	0.0420	-0.0671	0.1002	0.0924	0.0104	0.0070	0.0209	-0.0100	0.0001
70	-0.0107	-0.1207	0.1102	-0.0713	-0.0486	0.1794	0.0188	-0.0826	0.0345	0.0050
71	-0.0101	0.0980	0.0189	0.0272	0.0068	-0.0959	-0.0811	0.1197	-0.0065	0.0734
72	0.1054	0.1164	0.0002	0.0362	0.0487	-0.1100	-0.0647	0.0888	-0.0380	0.0789
73	0.2385	0.4346	0.0494	0.0634	0.0914	-0.2388	-0.0022	-0.0059	0.0162	0.1544
74	0.0899	-0.0300	0.0359	0.1865	0.0428	0.1380	0.1339	-0.0848	0.0922	0.0390
75	0.0174	0.0766	0.2212	0.0864	0.0832	0.1475	0.0529	0.0274	0.0023	0.1408
76	0.0002	0.1022	-0.0260	0.0561	0.0165	-0.0131	0.0823	0.0235	0.0073	0.0152
77	0.1624	0.2190	0.1846	0.0385	0.0637	0.0673	0.1438	-0.1494	0.1522	0.1259
78	0.1102	0.1682	-0.0278	0.1352	-0.0137	-0.0269	0.0755	0.0153	0.0327	0.1700
79	0.0797	0.0349	0.2324	0.0466	0.0318	0.1172	0.0481	-0.0990	0.0635	0.0513
80	0.0903	0.0751	0.0121	-0.0904	-0.0321	-0.1367	-0.0097	-0.0619	0.0115	-0.0523

	11	12	13	14	15	16	17	18	19	20
11	1.0000									
12	-0.1022	1.0000								
13	-0.0180	0.1307	1.0000							
14	0.0270	0.0571	0.0412	1.0000						
15	-0.0056	0.1293	0.0190	0.0491	1.0000					
16	0.0552	0.0485	0.0902	0.0753	-0.0846	1.0000				
17	0.0910	0.0827	0.0254	-0.0502	0.0641	0.1413	1.0000			
18	-0.1062	-0.0090	0.0583	0.1263	-0.0073	0.0439	0.0312	1.0000		
19	-0.0282	0.0965	0.1223	0.2401	0.0782	0.0309	0.0238	0.1060	1.0000	
20	-0.0636	0.0532	0.0576	0.0702	0.0108	0.0891	0.0908	0.0788	0.1208	1.0000
21	0.0076	-0.0002	-0.0189	0.0304	0.0221	0.0649	0.1399	-0.0245	0.1416	-0.0295
22	-0.0492	0.1696	-0.0027	0.1382	0.0159	0.0310	0.0723	0.0100	0.0225	0.0465
23	0.0318	-0.0272	-0.0442	0.0330	-0.0983	0.1008	-0.0244	0.0201	-0.0501	0.0373
24	-0.0883	0.1501	0.1110	0.0151	0.0550	0.0390	0.1196	0.0383	0.0915	0.2157
25	-0.0186	0.1546	-0.0145	-0.0656	0.0318	0.0877	0.1422	0.0154	0.0544	-0.0181
26	-0.1061	0.1056	0.0810	0.0652	0.0086	0.0167	-0.0325	0.1808	0.0872	-0.0144
27	-0.0225	0.0458	0.0838	0.1697	0.0767	-0.0307	-0.1772	0.0669	0.1365	0.0309
28	-0.1012	0.1074	0.0450	0.0586	0.2445	-0.0681	-0.0386	0.0856	-0.0478	0.0265
29	0.1039	0.0307	-0.0802	0.0281	-0.0177	0.0650	0.1501	-0.0541	-0.1004	0.0467
30	-0.1107	0.0533	0.0546	-0.0032	-0.0919	0.0784	0.0884	0.1433	0.0352	0.2472
31	-0.0827	0.0610	0.2187	0.0183	0.0035	0.0333	-0.0896	0.1404	-0.0145	0.0409
32	-0.0423	0.1051	0.0807	0.0920	0.1670	0.0771	0.1512	0.1661	0.1625	-0.0235
33	0.0583	0.0073	0.0175	0.1246	0.0996	-0.0169	0.0441	0.0809	0.0658	0.0426
34	0.0496	-0.1135	-0.0264	-0.0165	-0.0169	-0.0768	0.0167	-0.0045	0.1219	0.0060
35	-0.0096	0.0031	0.0044	0.2671	0.0739	-0.0392	0.0205	0.0121	0.3795	0.0508
36	-0.0184	0.0911	0.4643	0.1356	-0.0398	0.0557	-0.0225	0.0287	0.1764	0.0396
37	-0.0084	0.1207	0.0277	-0.0128	-0.0037	0.1100	0.4724	0.1760	0.0176	0.1284
38	0.0167	0.1007	0.1443	0.1996	0.0684	0.0318	0.0061	0.1443	0.4362	0.0621

39	-0.1054	0.4196	0.1336	0.1694	0.1001	0.0643	0.0216	0.0615	0.1286	0.1189
40	-0.1300	0.0643	0.0691	0.1160	-0.1654	0.1233	-0.0172	0.3811	0.1176	0.1143
41	0.1322	0.0694	0.0384	0.1412	0.0760	0.0188	-0.0269	-0.0040	0.3342	0.0544
42	-0.0014	-0.0165	-0.0419	0.0176	-0.1048	0.2282	-0.0502	0.1138	-0.0575	0.1523
43	-0.1880	0.1736	0.1360	0.0775	-0.0236	0.0144	-0.0409	0.1846	0.1248	0.0822
44	-0.0320	0.1083	-0.0042	-0.0706	0.0930	0.0362	0.0872	0.0046	0.0126	-0.0148
45	0.0294	0.0317	-0.0632	-0.1043	0.2055	-0.0027	0.0673	-0.0012	-0.0897	0.0062
46	0.0191	0.1048	-0.0472	0.0171	0.0207	0.1493	0.0632	0.0669	0.0523	0.2622
47	-0.0313	0.0833	0.1051	0.1004	-0.0047	0.0093	-0.0839	0.2737	0.1588	0.0106
48	0.0861	-0.1301	-0.0102	0.0129	-0.1482	0.0899	0.0700	0.0153	-0.1436	0.0734
49	0.0688	-0.0939	-0.0828	-0.1116	-0.0562	0.0748	0.1402	-0.1431	-0.0463	0.1088
50	-0.0570	0.0489	0.0788	0.0033	-0.0923	0.1129	0.0675	0.1708	-0.0339	0.2326
51	-0.1371	0.0217	0.1032	0.1642	0.0454	-0.0806	-0.1978	0.1263	0.0695	0.0735
52	0.0133	0.0751	-0.0147	-0.0431	0.2819	-0.0498	0.0115	-0.0098	-0.0497	-0.0366
53	-0.0135	0.0592	0.0086	0.1044	0.1320	-0.0628	0.1389	0.0872	0.1574	0.0901
54	-0.1385	0.0647	0.2392	0.0988	-0.0169	0.0867	-0.1224	0.1126	0.0444	-0.0455
55	-0.0597	0.1516	-0.0149	0.2491	0.1606	-0.0333	-0.0134	0.0919	0.3354	0.0198
56	0.0097	0.1381	-0.0165	0.0684	0.0689	0.0844	0.4834	0.0742	0.0657	0.0800
57	-0.0247	0.3283	0.0552	0.0538	0.1710	-0.0113	-0.0009	-0.0720	0.0381	0.0100
58	0.1568	-0.0100	-0.0819	-0.0729	0.1004	0.0120	0.0594	-0.2675	-0.0548	-0.1052
59	0.0579	0.0796	0.0963	0.2700	0.0990	-0.0562	-0.0653	0.0412	0.4114	0.0550
60	-0.0044	0.1817	0.1572	0.0602	0.0147	0.0890	0.0559	0.0641	0.0643	0.1911
61	0.0476	0.0405	0.0444	0.0985	0.1182	-0.3087	0.1121	-0.0171	0.2347	-0.0227
62	0.0265	0.0792	0.0724	0.0937	-0.0244	-0.0310	0.0261	0.0117	0.3058	0.1069
63	0.0440	0.0291	0.0463	0.1184	0.1681	-0.0491	0.0267	-0.0197	0.3470	-0.0189
64	-0.1013	0.0607	0.2648	0.0646	-0.0048	0.0286	-0.0267	0.0912	0.0212	-0.0185
65	-0.0821	0.3386	0.0279	0.1109	0.1265	-0.0082	-0.0111	0.0426	0.0715	0.1296
66	-0.0802	0.0439	0.0101	-0.1233	-0.0722	0.0844	0.1589	0.0667	-0.2565	0.0217
67	0.1137	-0.0671	0.0636	-0.0172	-0.1191	0.0878	0.1090	-0.0364	-0.0008	0.0645
68	-0.0509	0.1032	0.0139	0.0434	0.5617	-0.0553	0.0406	-0.0392	0.0936	-0.0162

25V0.0	28U0.0	02D0.0	0V80.0	0.0042	0.0128	0.0

	0.0017	-0.0504	0.0402	-0.0206	-0.0451	0.0771	0.0999	0.0029	-0.0096	0.0653
70	-0.0721	0.2229	0.0217	0.0606	0.1309	0.0271	-0.0250	-0.0796	0.0148	-0.0167
71	0.0079	-0.0343	-0.0256	0.0206	-0.0444	0.0609	0.0337	0.0452	-0.1030	0.0549
72	-0.0233	-0.0102	0.0157	0.0088	-0.0722	0.3560	0.0400	0.0344	-0.0507	0.1024
73	-0.0383	-0.0289	0.0917	0.0032	-0.2167	0.1518	0.0133	0.2077	0.0469	0.1413
74	0.0426	0.0411	0.0457	0.1103	0.1297	-0.2302	0.0521	0.0352	0.2015	0.0498
75	-0.0097	0.2147	-0.0394	0.0495	0.0877	0.0689	-0.0074	0.0815	0.0344	0.1450
76	-0.0413	0.0502	-0.0015	-0.0001	0.0067	0.0374	0.0887	0.0478	-0.0531	0.0980
77	-0.0320	0.0885	0.1423	0.1657	0.0390	-0.0145	-0.0849	0.2986	0.1754	0.0513
78	0.0488	-0.0371	-0.0208	0.0141	-0.0695	0.1039	0.0272	0.0710	0.0523	-0.0051
79	-0.0805	0.3114	0.0580	0.0557	0.1072	-0.0296	0.0123	0.0452	0.1298	-0.0113
80	-0.0709	0.0760	0.2718	0.0383	-0.0855	-0.0521	-0.0571	0.0071	0.1315	-0.0418

	21	22	23	24	25	26	27	28	29	30
21	1.0000									
22	0.0818	1.0000								
23	0.0568	0.0128	1.0000							
24	-0.0749	0.0009	-0.0192	1.0000						
25	0.0444	-0.0249	-0.0357	0.0513	1.0000					
26	-0.0232	-0.0588	0.0681	0.0688	0.0711	1.0000				
27	0.0136	0.0352	-0.0842	-0.0214	-0.0836	0.0650	1.0000			
28	-0.0017	0.1071	-0.0661	0.0623	-0.0849	-0.0738	0.1739	1.0000		
29	0.0468	0.0033	0.1281	0.0354	0.0711	-0.0084	-0.0288	-0.0531	1.0000	
30	0.0654	0.0088	0.0694	0.2467	0.0720	0.0367	0.0055	0.0444	0.1193	1.0000
31	-0.0412	0.0977	0.0544	-0.0316	-0.1162	0.0236	0.0809	0.1954	0.0654	0.0497
32	0.0188	0.0716	-0.0368	0.0765	0.2738	0.0802	-0.0165	0.0106	0.1209	0.0964
33	0.3334	0.0837	0.0028	0.0300	0.0478	-0.0603	0.0964	0.0586	0.0559	0.0699
34	0.1269	0.0098	0.0795	-0.0450	-0.0734	0.0733	0.0716	-0.0875	0.0506	0.0238
35	0.0917	0.0349	-0.0541	0.0199	0.0045	0.0873	0.1320	-0.0117	-0.1200	-0.0357
36	-0.0501	0.0736	-0.0338	-0.0353	0.0195	0.0913	0.1390	0.0671	-0.0841	0.0385
37	0.0037	0.1052	0.0251	0.1497	0.0743	0.0104	-0.0496	0.0747	0.0810	0.1393
38	0.0056	0.0378	0.0369	0.1070	0.0265	0.0781	0.1868	0.0828	-0.0331	0.0991
39	-0.0100	0.3015	-0.1304	0.1665	0.0923	0.0467	0.1349	0.2384	-0.0020	0.0847
40	-0.0820	0.0336	0.1208	0.1136	0.0059	0.1475	0.0655	-0.0345	-0.1035	0.1130
41	0.0604	0.0231	0.0108	-0.0454	-0.0525	0.1321	0.2081	0.0204	-0.0770	-0.0282
42	-0.0207	0.0756	0.2354	0.0606	0.0490	0.0334	-0.0010	-0.0776	0.0669	0.0481
43	-0.1116	0.0142	0.0214	0.0339	-0.0169	0.5826	0.2056	-0.0094	-0.0558	0.0473
44	-0.0126	0.0020	-0.0565	0.0089	0.6777	0.0971	-0.0434	0.0328	0.0622	0.0596
45	-0.0429	-0.0258	-0.0907	-0.0188	0.1132	-0.0150	-0.0211	0.0939	0.0448	-0.0192
46	0.0548	0.0390	-0.0022	0.1276	0.0730	0.0592	-0.0362	-0.0662	0.0151	0.1339
47	-0.0353	0.0307	0.0634	0.0657	-0.0416	0.1327	0.2394	0.0933	-0.0130	0.1087
48	0.0616	0.0019	0.1934	-0.0357	-0.0441	-0.0534	-0.0746	-0.0595	0.0588	0.1142

49	0.1023	-0.0612	0.2364	0.0076	0.0313	-0.0685	-0.1725	-0.1516	0.1430	0.0366
50	-0.0418	-0.0159	0.0473	0.1855	-0.0259	0.0584	0.0284	-0.0687	0.0385	0.1743
51	-0.0025	0.0228	-0.0675	0.0574	-0.1308	0.0904	0.3381	0.0390	-0.0148	-0.0186
52	-0.0255	0.0486	-0.1687	-0.0065	0.0521	-0.0744	0.1065	0.1853	-0.0131	-0.0653
53	0.0485	0.0374	-0.0404	0.0473	0.1472	0.0086	0.0269	0.0735	0.0418	0.0810
54	0.0339	0.0871	0.0392	-0.0774	-0.0781	0.0450	0.1215	0.2234	-0.0467	0.0538
55	0.0426	0.1203	-0.0739	-0.0053	0.0684	0.0957	0.1148	0.0490	-0.0260	0.0233
56	0.0810	0.0534	0.0480	0.0986	0.1402	-0.0186	0.0501	0.0790	0.1764	0.1560
57	0.0231	0.2031	-0.0440	-0.0190	0.0186	0.0323	0.1896	0.1302	0.0261	-0.0454
58	0.0097	-0.0245	-0.0583	-0.1155	-0.0089	-0.1090	-0.0467	0.0058	0.2124	-0.1077
59	-0.0203	0.0460	0.0112	0.0952	-0.0088	0.1087	0.2121	0.0978	-0.0424	0.0837
60	0.0086	0.0322	-0.0137	0.4335	0.0530	0.0328	0.0461	0.1196	0.0942	0.2813
61	0.0482	0.0643	-0.0851	0.0145	-0.0147	0.0748	0.1750	0.0049	0.0677	-0.0008
62	0.0673	0.0814	-0.0493	0.0056	0.0511	0.0432	0.0921	-0.0802	-0.0024	0.0985
63	0.0687	0.0439	-0.1548	-0.0396	0.1732	0.0622	0.1449	0.0682	-0.0291	-0.0323
64	0.0074	0.1030	-0.0007	-0.0198	-0.0642	0.0203	0.1249	0.2204	0.0132	0.0417
65	0.0206	0.2180	-0.0454	0.1617	0.0489	0.0749	0.0877	0.2107	0.0187	0.1333
66	0.0652	-0.0329	0.0910	0.0625	0.0848	-0.0721	-0.1505	-0.1311	0.1054	-0.0113
67	0.1108	-0.0979	0.2673	0.0441	0.0417	-0.0907	-0.0250	-0.1632	0.2046	0.0420
68	-0.0094	-0.0194	-0.1305	0.0391	0.0853	0.0003	0.0867	0.2687	-0.0183	-0.0280
69	0.0448	-0.0856	0.1673	0.0399	0.0273	-0.0203	-0.0815	-0.0313	0.1511	0.1195
70	0.0014	0.2109	-0.1041	-0.0791	-0.0431	-0.0186	0.1639	0.3459	-0.0302	-0.1203
71	0.0488	-0.0066	0.3920	0.0299	-0.0668	-0.0043	-0.0473	-0.0868	0.1336	0.1054
72	-0.0240	-0.0083	0.1734	0.0172	0.0376	0.0182	-0.0383	-0.0349	0.0436	0.0042
73	-0.0416	-0.0140	0.2022	0.0635	-0.0209	0.1461	0.0432	-0.1118	0.0017	0.1300
74	0.0127	0.0055	-0.0261	0.1117	0.1170	0.0786	0.1650	0.0466	0.0318	0.0529
75	0.0251	0.1954	0.0198	0.0472	-0.0199	0.0134	0.1454	0.1590	0.0887	0.1049
76	0.0062	0.0418	-0.0000	0.0091	0.0129	0.0069	-0.0998	0.0884	0.0479	-0.0075
77	-0.0174	0.0642	-0.0327	0.0169	-0.1073	0.1543	0.2895	0.1558	-0.0684	0.0460
78	-0.0287	-0.0201	0.1561	-0.0898	-0.0302	0.0600	-0.0696	-0.1027	0.0126	0.0503

| | | |

0.0054	0.1362	-0.0466	0.0133	-0.0331	0.0651	0.2150	0.1692	-0.0473	-0.0824
0.0166	-0.0036	-0.0802	-0.0712	-0.0127	0.0715	0.1039	-0.0640	-0.0819	-0.0532

	31	32	33	34	35	36	37	38	39	40
31	1.0000									
32	0.0376	1.0000								
33	0.0292	0.0808	1.0000							
34	0.0424	-0.0270	0.0956	1.0000						
35	-0.0777	0.1423	0.0398	0.1211	1.0000					
36	0.2666	0.1005	0.0009	0.0008	0.1160	1.0000				
37	0.0326	0.1097	0.1667	-0.0566	-0.0302	-0.0582	1.0000			
38	0.0996	0.1085	0.1691	0.0998	0.2564	0.1827	0.0975	1.0000		
39	0.0736	0.1574	0.1367	-0.0152	0.0484	0.1387	0.1575	0.2576	1.0000	
40	0.1343	0.1709	0.0270	-0.0207	-0.0183	0.0588	0.1764	0.1909	0.0863	1.0000
41	0.0297	-0.0271	0.0141	0.0991	0.3566	0.0966	-0.0180	0.3066	0.0833	-0.0372
42	-0.0188	0.0306	-0.0427	-0.0618	-0.0590	-0.0169	-0.0124	0.0240	-0.0035	0.1868
43	0.0628	0.0806	-0.0469	0.0134	0.0833	0.1609	0.0446	0.2011	0.1846	0.2283
44	-0.0230	0.2704	0.0149	-0.1130	-0.0142	-0.0009	0.0600	0.0131	0.0933	0.0222
45	-0.0496	0.1018	0.0615	-0.0116	-0.0202	-0.0114	0.0528	-0.0067	0.0386	-0.0720
46	-0.0314	0.1211	0.0353	-0.0113	0.0037	-0.0901	0.1027	0.0572	0.1211	0.1503
47	0.1030	0.1585	0.0090	0.0432	0.0982	0.1871	0.0055	0.2645	0.1466	0.2644
48	-0.0372	-0.0805	0.0594	0.1009	-0.1064	0.0007	0.0231	-0.1058	-0.0922	0.1159
49	-0.0692	-0.0841	-0.0311	-0.0003	-0.1164	-0.0547	0.0943	-0.1855	-0.1557	-0.0748
50	0.0024	-0.0558	0.0620	-0.0193	-0.0747	-0.0095	0.1159	0.1004	-0.0109	0.2721
51	0.1024	-0.0476	0.0332	0.0109	0.0767	0.1442	-0.1368	0.1102	0.0896	0.0000
52	0.0300	0.1367	0.0807	-0.0158	0.0358	0.0567	-0.0011	0.0177	0.1004	-0.1213
53	-0.0477	0.2270	0.1118	0.0299	0.0636	0.0131	0.1483	0.1462	0.1061	0.0437
54	0.5991	-0.0128	0.0592	0.0182	-0.0203	0.2772	-0.0234	0.1711	0.1085	0.1701
55	0.0379	0.1020	0.1042	0.0309	0.3068	0.1359	0.0449	0.3114	0.2018	0.0634
56	-0.0001	0.1896	0.1687	0.0562	0.0518	-0.0049	0.5205	0.1374	0.1411	0.0316
57	0.0376	0.0322	0.0842	-0.0143	0.0083	-0.0005	0.0987	0.1331	0.4161	-0.0622
58	-0.0618	-0.0913	0.0062	0.0709	-0.0071	-0.0436	-0.0403	-0.1080	-0.0397	-0.4960

0.0434
0.1400
0.2110
-0.0432
0.1320

?	-0.0056	0.0438	0.0632	0.0373	0.3629	0.1350	-0.0855	0.5310	0.1600	0.0356
60	0.0950	0.0642	0.1226	-0.0256	-0.0266	0.1223	0.0880	0.2276	0.2648	0.1872
61	0.0381	0.0798	0.0880	0.2429	0.1737	0.0978	0.1274	0.1913	0.1261	-0.0399
62	0.0128	0.1185	0.0437	0.1046	0.3075	0.0223	-0.0340	0.2111	0.1095	-0.0648
63	-0.0239	0.0970	0.1328	0.0711	0.2901	0.0890	-0.0307	0.2998	0.0390	-0.1235
64	0.6070	-0.0047	0.1036	0.0212	-0.0222	0.2323	0.0590	0.1138	0.1028	0.1320
65	0.1533	0.0581	0.1908	0.0042	0.0726	0.1041	0.1196	0.2361	0.4851	0.0576
66	0.0050	0.0367	0.0088	-0.0370	-0.3020	-0.0800	0.1711	-0.2299	-0.0304	0.1509
67	0.0039	0.0888	0.0333	0.0827	-0.0895	0.0042	0.0768	0.0079	-0.0454	0.1518
68	0.0406	0.1940	0.0704	0.0064	0.1256	0.0836	-0.0532	0.0880	0.1396	-0.1699
69	0.0125	0.0138	0.0026	0.0382	-0.0465	-0.0146	0.1034	-0.0232	-0.1017	0.0752
70	0.0813	0.0573	0.0037	-0.0716	0.0367	0.0326	-0.0510	0.0507	0.2296	-0.1321
71	-0.0048	-0.1424	-0.0601	0.1022	-0.0889	-0.0859	0.0199	-0.0272	-0.0960	0.0767
72	-0.0715	0.0015	-0.0594	-0.1074	-0.0633	-0.0311	0.0509	-0.0295	-0.0010	0.1451
73	0.0501	0.0539	-0.0393	0.0077	-0.0262	0.0154	0.0887	0.0921	-0.0542	0.0279
74	-0.0208	0.0971	0.0974	0.2517	0.1525	0.0926	0.1324	0.2271	0.1437	0.0126
75	0.1264	0.0231	0.1352	-0.0072	0.0657	0.0590	0.1157	0.1332	0.4009	0.1344
76	0.0021	0.1301	0.0571	-0.3295	-0.0387	-0.0109	0.1494	-0.0431	0.0075	0.0960
77	0.1271	0.0937	0.0800	0.0062	0.0825	0.2116	0.0454	0.2977	0.1800	0.2563
78	-0.0423	0.0420	0.0592	-0.0703	0.0220	-0.0323	0.0905	0.0281	-0.1244	0.1671
79	0.1205	0.1187	0.0192	0.0044	0.1225	0.0990	0.0601	0.1409	0.4284	0.0637
80	0.2338	0.0690	-0.0963	0.0266	0.0790	0.3987	-0.0807	0.0627	0.0403	0.0826

	41	42	43	44	45	46	47	48	49	50
41	1.0000									
42	0.0263	1.0000								
43	0.1146	0.0482	1.0000							
44	-0.0102	0.0712	0.0745	1.0000						
45	0.0072	-0.1079	0.0274	0.1516	1.0000					
46	0.0596	0.1622	0.0754	0.0800	0.0299	1.0000				
47	0.1094	-0.0041	0.2248	-0.0423	-0.0180	0.0804	1.0000			
48	-0.0797	0.0800	-0.0571	-0.0354	0.0668	-0.0398	-0.0284	1.0000		
49	-0.0989	0.0888	-0.1684	-0.0276	-0.1014	0.0432	-0.1804	0.2006	1.0000	
50	-0.0233	0.0788	0.1426	-0.0107	-0.1024	0.2041	0.1666	0.0792	0.0011	1.0000
51	0.1466	-0.0064	0.1636	-0.0994	-0.0192	0.0435	0.1803	-0.0472	-0.0867	0.1008
52	0.0160	-0.1707	-0.0663	0.0791	0.7404	-0.0102	0.0286	-0.0384	-0.1582	-0.1290
53	0.0364	-0.0711	0.0725	0.0801	0.1505	0.0865	0.0793	-0.0609	-0.0672	-0.0048
54	0.0234	-0.0191	0.0880	0.0243	-0.1090	-0.0018	0.0912	-0.0314	-0.1196	0.0477
55	0.1993	-0.0915	0.1189	0.0403	0.0533	-0.0468	0.1456	-0.1263	-0.0703	-0.0467
56	0.0656	-0.0634	0.0226	0.0828	0.0761	0.0812	0.0576	0.0089	0.0640	0.0758
57	0.0853	-0.0796	0.0796	0.0657	0.1073	0.0470	0.0987	-0.0787	-0.1230	-0.0844
58	0.0599	-0.0885	-0.1325	0.0141	0.0675	-0.0158	-0.2292	-0.1137	0.0623	-0.1109
59	0.4916	0.0272	0.1448	-0.0131	0.0272	0.0657	0.1436	-0.1313	-0.1239	0.0576
60	0.0480	0.0989	0.1177	0.0079	-0.0092	0.1128	0.1642	-0.0088	-0.0360	0.2760
61	0.1762	-0.2598	0.0275	-0.0391	0.0672	-0.0223	0.0667	-0.1019	-0.0173	-0.0903
62	0.2876	0.0085	0.0581	0.0456	-0.0372	0.0645	0.0134	-0.1066	-0.0593	-0.0537
63	0.3742	-0.1074	0.0484	0.1341	0.0569	0.0345	0.0435	-0.1700	-0.0998	-0.1052
64	0.0122	-0.0799	0.0526	0.0354	-0.1131	0.0095	0.0794	-0.0381	-0.0500	0.1093
65	0.0153	-0.0102	0.0809	-0.0088	0.0748	0.1420	0.1439	-0.0727	-0.1199	0.1122
66	-0.5164	0.1129	-0.0372	0.0613	-0.0045	0.1203	-0.0854	0.1435	0.1087	0.0745
67	-0.1059	0.1727	-0.1245	-0.0007	-0.1212	0.0761	0.0019	0.1994	0.2593	0.0773
68	0.1139	-0.1414	-0.0216	0.0790	0.2977	-0.0074	0.0222	-0.1476	-0.1049	-0.1530

69	-0.0397	0.1279	0.0029	0.0779	0.0533	0.0980	-0.0738	0.1755	0.1601	0.0736
70	0.0908	-0.0239	0.0500	0.0353	0.1001	-0.0682	0.0428	-0.0903	-0.1477	-0.1495
71	-0.0155	0.2636	-0.0214	-0.0412	-0.0131	0.0816	-0.0362	0.2831	0.1662	0.0655
72	0.0460	0.2910	0.0289	-0.0121	-0.0786	0.1125	-0.0259	0.1198	0.1455	0.1077
73	0.0081	0.1896	0.1683	-0.0374	-0.0839	0.1217	0.1212	0.1797	0.1017	0.2562
74	0.1264	-0.2597	0.0686	0.0236	0.0374	0.0439	0.1242	-0.0698	-0.0721	0.0175
75	0.0641	0.0418	0.0828	0.0325	0.0992	0.0588	0.1492	0.0015	-0.0760	0.0501
76	-0.0796	0.0524	-0.0298	0.0726	0.0310	-0.0266	-0.0450	-0.0018	-0.0030	0.0442
77	0.1504	-0.0460	0.2374	-0.0508	0.0221	0.0613	0.5494	-0.0459	-0.2877	0.1198
78	0.0781	0.0949	0.1198	-0.0055	0.0731	-0.0405	0.0673	0.1917	0.0712	0.0680
79	0.1123	-0.0334	0.1954	0.0299	0.0640	0.0631	0.1147	-0.0964	-0.2483	-0.0624
80	0.0266	-0.0571	0.1254	-0.0240	-0.1389	-0.0592	0.1300	-0.0914	0.0096	-0.0693

	51	52	53	54	55	56	57	58	59	60
51	1.0000									
52	0.0732	1.0000								
53	-0.0462	0.1648	1.0000							
54	0.1086	0.0183	-0.0183	1.0000						
55	0.1242	0.1503	0.1886	0.0654	1.0000					
56	-0.0485	0.0793	0.2053	-0.0540	0.1299	1.0000				
57	0.1171	0.1431	0.0561	0.0628	0.2225	0.1316	1.0000			
58	-0.0567	0.0714	-0.0201	-0.0774	-0.0543	0.0443	0.1001	1.0000		
59	0.1721	0.0341	0.1167	0.0193	0.3114	0.1199	0.1080	0.0075	1.0000	
60	0.0627	0.0031	0.1096	0.0961	0.0713	0.1196	0.0225	-0.1972	0.1387	1.0000
61	0.0519	0.1274	0.1960	-0.0372	0.2056	0.1752	0.1012	0.0862	0.2223	0.0353
62	0.0862	-0.0335	0.0031	0.0349	0.1524	0.0600	0.0990	0.0210	0.2559	0.0339
63	0.1103	0.1225	0.0663	0.0452	0.2669	0.0683	0.1391	0.0881	0.3516	-0.0690
64	0.0892	0.0037	-0.0363	0.7103	0.0582	0.0583	0.0927	-0.0723	0.0109	0.1084
65	0.0965	0.1416	0.1122	0.1574	0.1857	0.1292	0.3205	-0.0181	0.1515	0.3301
66	-0.0649	-0.0674	-0.0387	0.0143	-0.1479	0.0006	0.0075	-0.0276	-0.3977	-0.0086
67	-0.1233	-0.1415	-0.0065	-0.0419	-0.1045	0.0192	-0.0847	-0.0193	-0.0819	0.0694
68	0.0421	0.3714	0.1859	0.0037	0.1326	0.1678	0.1236	0.0907	0.1769	-0.0137
69	-0.1120	-0.0187	0.0293	-0.0357	-0.0245	0.0859	-0.0889	0.0168	0.0224	-0.0311
70	0.0616	0.1502	0.0100	0.1187	0.0309	-0.0207	0.2844	0.0494	0.1025	-0.0164
71	-0.0029	-0.1322	-0.1677	-0.0520	-0.0648	-0.0469	-0.0296	-0.0305	-0.0521	-0.0090
72	-0.0549	-0.1236	-0.0450	-0.0238	-0.0819	0.0027	-0.0360	-0.0559	-0.0118	0.0445
73	0.0440	-0.1839	0.0079	0.0643	-0.0164	0.0191	-0.0711	-0.2817	0.0335	0.0648
74	0.0378	0.0603	0.3067	-0.0444	0.2507	0.1588	0.0819	0.0282	0.2103	0.0914
75	0.0080	0.1064	0.0181	0.1076	0.0900	0.0779	0.3483	-0.0361	0.0799	0.2196
76	-0.0520	0.0280	-0.0000	0.0348	-0.0712	-0.0163	-0.0382	-0.1697	-0.0973	0.0272
77	0.2752	0.0602	0.1721	0.1759	0.1670	0.0639	0.1700	-0.2148	0.2597	0.1324
78	-0.0217	0.0078	0.0314	-0.0510	0.0228	-0.0042	-0.0803	-0.1445	0.0703	-0.0296

0.0950	0.1472	0.0300	0.1011	0.1789	0.0547	0.4418	-0.0081	0.1123	0.0651
0.1139	-0.1151	-0.0454	0.1869	0.0306	-0.1106	0.0417	-0.0226	0.0223	-0.0162

	61	62	63	64	65	66	67	68	69	70
61	1.0000									
62	0.1843	1.0000								
63	0.2819	0.3303	1.0000							
64	0.0533	0.0421	0.0404	1.0000						
65	0.1136	0.0850	0.0562	0.2112	1.0000					
66	-0.1065	-0.1355	-0.3032	0.0441	0.0157	1.0000				
67	0.0365	-0.0324	-0.1067	-0.0564	-0.0961	0.1837	1.0000			
68	0.2113	0.0190	0.2141	-0.0170	0.1228	-0.1931	-0.1397	1.0000		
69	0.0376	0.0288	-0.0326	-0.0492	-0.1092	0.1668	0.2404	-0.0188	1.0000	
70	-0.0344	0.0454	0.1355	0.0654	0.1071	-0.1126	-0.1100	0.1527	-0.1524	1.0000
71	-0.1057	-0.0520	-0.1764	-0.0409	-0.0464	0.1917	0.2181	-0.1851	0.1931	-0.0914
72	-0.2168	-0.0462	-0.1009	0.0279	-0.0778	0.0498	0.1633	-0.0802	0.1175	-0.0584
73	-0.0542	-0.0309	-0.0812	0.0790	-0.0577	0.1221	0.2045	-0.1956	0.1354	-0.1696
74	0.4699	0.0873	0.2304	0.0075	0.1663	-0.0967	-0.0415	0.1496	0.0414	-0.0687
75	0.0679	0.0554	0.0397	0.0860	0.5075	-0.0349	-0.0216	0.0938	-0.0762	0.1553
76	-0.1429	-0.0721	-0.0677	0.0258	0.0530	0.1295	0.0452	0.0201	0.0371	0.0469
77	0.0630	0.0719	0.0726	0.1382	0.1687	-0.0772	-0.0261	0.0210	-0.0533	0.1046
78	-0.1073	0.0151	-0.0091	-0.0775	-0.0637	-0.0404	0.0780	-0.0854	0.1718	-0.0427
79	0.1728	0.1256	0.1388	0.0958	0.2373	-0.0217	-0.0830	0.1235	-0.0549	0.2496
80	0.1135	0.0982	0.0257	0.1729	-0.0025	0.0284	0.0336	-0.0701	-0.0199	-0.0147

	61	62	63	64	65	66	67	68	69	70
61	1.0000									
62	0.1843	1.0000								
63	0.2819	0.3303	1.0000							
64	0.0533	0.0421	0.0404	1.0000						
65	0.1136	0.0850	0.0562	0.2112	1.0000					
66	-0.1065	-0.1355	-0.3032	0.0441	0.0157	1.0000				
67	0.0365	-0.0324	-0.1067	-0.0564	-0.0961	0.1837	1.0000			
68	0.2113	0.0190	0.2141	-0.0170	0.1228	-0.1931	-0.1397	1.0000		
69	0.0376	0.0288	-0.0326	-0.0492	-0.1092	0.1668	0.2404	-0.0188	1.0000	
70	-0.0344	0.0454	0.1355	0.0654	0.1071	-0.1126	-0.1100	0.1527	-0.1524	1.0000
71	-0.1057	-0.0520	-0.1764	-0.0409	-0.0464	0.1917	0.2181	-0.1851	0.1931	-0.0914
72	-0.2168	-0.0462	-0.1009	0.0279	-0.0778	0.0498	0.1633	-0.0802	0.1175	-0.0584
73	-0.0542	-0.0309	-0.0812	0.0790	-0.0577	0.1221	0.2045	-0.1956	0.1354	-0.1696
74	0.4699	0.0873	0.2304	0.0075	0.1663	-0.0967	-0.0415	0.1496	0.0414	-0.0687
75	0.0679	0.0554	0.0397	0.0860	0.5075	-0.0349	-0.0216	0.0938	-0.0762	0.1553
76	-0.1429	-0.0721	-0.0677	0.0258	0.0530	0.1295	0.0452	0.0201	0.0371	0.0469
77	0.0630	0.0719	0.0726	0.1382	0.1687	-0.0772	-0.0261	0.0210	-0.0533	0.1046
78	-0.1073	0.0151	-0.0091	-0.0775	-0.0637	-0.0404	0.0780	-0.0854	0.1718	-0.0427
79	0.1728	0.1256	0.1388	0.0958	0.2373	-0.0217	-0.0830	0.1235	-0.0549	0.2496
	0.1135	0.0982	0.0257	0.1729	-0.0025	0.0284	0.0336	-0.0701	-0.0199	-0.0147

	71	72	73	74	75	76	77	78	79	80
71	1.0000									
72	0.1514	1.0000								
73	0.1480	0.2462	1.0000							
74	-0.0911	-0.1842	0.0490	1.0000						
75	-0.0168	-0.0698	-0.0005	0.0613	1.0000					
76	-0.0976	0.1883	0.1079	-0.2112	0.0394	1.0000				
77	-0.0251	-0.0650	0.1200	0.0935	0.1349	0.0379	1.0000			
78	0.1019	0.2126	0.2161	-0.0858	-0.0513	0.2161	0.0483	1.0000		
79	-0.0905	-0.0451	-0.0363	0.1059	0.2405	0.0046	0.2039	-0.0742	1.0000	
80	-0.0927	-0.0512	0.0376	0.0580	-0.0473	-0.0793	0.1424	-0.0594	0.1529	1.0000

APPENDIX IV

Factor loadings of the eighty variables in part C of the questionnaire with varimax rotation for fifteen factors.

VIMAX ROTATION ANALYSIS.

PORTIONS OF VARIANCE.

1	0.0512	2	0.0437	3	0.0346	4	0.0460	5	0.0398	6	0.0328
7	0.0259	8	0.0311	9	0.0357	10	0.0348	11	0.0280	12	0.0232
13	0.0254	14	0.0261	15	0.0208						

FT LOADINGS.

1	0.7179	2	-0.8142	3	0.7713	4	-0.7159	5	0.8253	6	0.8340
7	-0.8431	8	-0.6405	9	0.6830	10	-0.6671	11	0.7474	12	-0.7233
13	-0.6624	14	-0.5863	15	0.4605						

MALITIES.

1	0.2883	2	0.7055	3	0.4020	4	0.5646	5	0.3267	6	0.6210
7	0.6353	8	0.5808	9	0.2881	10	0.3011	11	0.4159	12	0.4653
13	0.5375	14	0.2494	15	0.4326	16	0.4922	17	0.6191	18	0.4113
19	0.5630	20	0.4039	21	0.5927	22	0.3170	23	0.4928	24	0.4955
25	0.7420	26	0.5901	27	0.3900	28	0.4253	29	0.3285	30	0.3492
31	0.6883	32	0.4496	33	0.5804	34	0.4682	35	0.4900	36	0.5447
37	0.6682	38	0.5179	39	0.6157	40	0.7256	41	0.5839	42	0.4151
43	0.6813	44	0.6964	45	0.6741	46	0.4041	47	0.4974	48	0.3504
49	0.3829	50	0.4205	51	0.4073	52	0.7471	53	0.2909	54	0.7572
55	0.3444	56	0.5713	57	0.5659	58	0.5149	59	0.6303	60	0.5563
61	0.5789	62	0.3341	63	0.4688	64	0.7464	65	0.5378	66	0.5473
67	0.4753	68	0.5487	69	0.3291	70	0.3788	71	0.4418	72	0.4096
73	0.4480	74	0.5525	75	0.4437	76	0.3964	77	0.5800	78	0.4300
79	0.4612	80	0.5411								

FACTOR LOADINGS.

	1	2	3	4	5	6	7	8	9	10
1	0.1143	-0.4243	0.0158	-0.1424	-0.1488	0.0744	0.0068	0.0171	-0.0720	-0.0607
2	-0.0681	-0.8142	-0.0045	-0.0467	-0.0472	0.0239	-0.0715	0.0203	0.1006	-0.0987
3	-0.0885	-0.0767	0.0388	-0.5498	0.0148	-0.1254	-0.0537	-0.0580	-0.0200	-0.0819
4	-0.0181	-0.0175	0.6805	-0.0919	-0.0639	-0.0088	-0.0051	-0.0793	0.0416	-0.1168
5	0.0677	-0.1318	0.1201	-0.0727	-0.0664	-0.0110	-0.0139	0.0349	0.5044	0.0342
6	0.0352	0.0868	0.0125	-0.1695	0.7454	0.0071	-0.0107	-0.0708	0.0329	0.0750
7	0.1139	-0.0900	0.0364	-0.0241	0.1349	0.0796	-0.0743	-0.0801	0.0205	-0.0508
8	-0.0047	0.0587	0.0461	-0.0006	-0.0229	0.0283	0.0476	0.0699	0.1198	-0.2096
9	-0.0600	-0.1101	0.2135	0.0177	0.0527	-0.0593	0.0236	0.0036	0.1369	0.1282
10	-0.0505	-0.2105	0.1343	-0.2898	0.0232	-0.0179	0.0360	0.0857	0.1611	-0.2294
11	0.1118	0.1819	0.1311	0.1221	-0.0468	-0.1067	-0.1033	-0.0039	-0.1561	-0.1306
12	0.0352	0.0328	0.0385	-0.5758	0.0421	-0.0227	-0.1297	0.0710	0.1750	0.0518
13	0.0387	0.0190	0.0025	0.0002	0.0053	0.2041	0.0057	0.0611	0.1554	-0.0125
14	0.3713	-0.1701	-0.0134	-0.1291	-0.0166	0.0036	0.1425	0.0479	0.0061	0.0123
15	0.1106	0.1972	0.0021	-0.1216	0.5287	-0.0285	0.0063	-0.0262	0.0455	0.0644
16	0.0360	-0.0313	0.1728	-0.0235	-0.0188	0.0570	-0.1055	0.5538	0.0953	-0.1552
17	-0.0195	0.0736	0.7358	0.0272	0.0394	-0.0851	-0.0730	0.0419	0.1015	-0.0172
18	0.0113	-0.4531	0.1451	0.0798	0.0472	0.1334	-0.0016	0.0341	0.1108	0.0794
19	0.6613	-0.1435	0.0281	-0.0078	-0.0338	-0.0668	-0.0272	-0.0988	0.1117	0.0770
20	0.0952	-0.0538	0.1031	-0.0392	0.0608	-0.0256	0.1610	0.1241	0.5154	-0.0852
21	0.0680	0.0877	0.0477	-0.0224	-0.0607	-0.0290	-0.0145	-0.0051	-0.0421	-0.0913
22	0.0856	-0.1056	0.0810	-0.4593	-0.0102	0.1112	0.0874	0.0655	-0.0452	0.0444
23	0.0147	-0.0616	-0.0091	-0.0148	-0.1221	0.0793	0.0057	0.0469	-0.0151	-0.6671
24	0.0004	-0.0105	0.0335	-0.0307	0.0542	-0.0801	-0.0008	-0.0398	0.6830	0.0221
25	0.0316	0.0215	0.0577	-0.0256	0.0388	-0.0762	-0.8431	0.0085	0.0655	0.0228
26	0.1204	-0.0775	-0.0098	-0.0066	-0.0567	0.0092	-0.1177	-0.0321	0.0185	-0.0944
27	0.2035	0.0199	-0.0593	-0.1673	0.0640	0.0892	0.1316	-0.0758	-0.0386	0.0394
	0.0336	0.0914	0.0400	-0.2527	0.2914	0.3826	0.1097	0.0883	0.0743	0.1279

	-0.0949	0.2554	0.2465	-0.0247	-0.0210	0:0646	-0.2048	-0.0398	0.0758	-0.3316
	0.0100	-0.0595	0.1027	0.0325	-0.0184	0:0897	-0.0891	-0.0416	0.5283	-0.1479
	-0.0184	-0.0812	0.0081	-0.0588	0.0328	0:7935	0.0385	-0.0516	-0.0006	-0.0618
32	0.1162	-0.2575	0.1836	-0.0762	0.2249	-0:0686	-0.4420	0.0353	0.0211	0.0971
33	0.0733	-0.0275	0.1157	-0.0891	0.0843	0:0866	-0.0558	-0.0560	0.0575	-0.0109
34	0.1303	0.0253	-0.0141	0.0559	-0.0082	0:0596	0.0879	-0.4870	-0.0350	-0.2520
35	0.6460	-0.0622	-0.0041	0.0069	0.0387	-0:0632	0.0601	-0.0590	-0.0328	0.1202
36	0.1515	-0.0202	-0.0483	-0.0359	0.0447	0:2565	-0.0294	-0.0097	0.0342	-0.0064
37	-0.0526	-0.1549	0.7713	-0.1343	-0.0150	0:0558	-0.0008	0.0059	0.1282	-0.0099
38	0.5598	-0.1543	0.0502	-0.1444	0.0011	0:1174	-0.0804	-0.1026	0.1914	-0.0348
39	0.1171	-0.0383	0.0329	-0.7159	0.0761	0:0515	-0.0765	-0.0242	0.2251	0.8950
40	-0.0034	-0.8010	0.0316	-0.0447	-0.0964	0:1056	-0.0608	0.0354	0.1732	-0.1004
41	0.7047	0.1064	0.0112	-0.0098	0.0210	0:0533	0.0470	0.0615	-0.0296	-0.0670
42	0.0326	-0.0940	-0.1294	-0.0395	-0.1247	-0:0367	-0.1065	0.4221	0.1781	-0.3435
43	0.1089	-0.1541	0.0445	-0.1358	-0.0361	0:0055	-0.0170	0.0124	0.0719	-0.0496
44	0.0120	0.0103	0.0283	-0.0537	0.0913	0:0587	-0.8095	0.0766	0.0008	0.0208
45	-0.0706	-0.0201	0.0526	-0.0230	0.7636	-0.0591	-0.1273	-0.0198	-0.0772	-0.0499
46	0.0387	-0.1024	0.0515	-0.0900	0.0419	-0:0706	-0.1161	0.1056	0.3581	-0.0331
47	0.1072	-0.2999	-0.0192	-0.1073	0.0296	0:0223	-0.0179	-0.0620	0.0992	0.0374
48	-0.1681	-0.1764	0.0171	0.0674	0.0352	-0:0112	0.0827	0.0374	-0.0423	-0.4850
49	-0.0724	0.1534	0.1149	0.1522	-0.1241	-0:0483	0.0068	0.0321	0.0718	-0.4303
50	-0.0822	-0.1800	0.1007	0.0835	-0.1551	0:0599	0.0288	0.0884	0.4777	-0.0395
51	0.1111	0.0261	-0.1914	-0.0484	0.0670	0.0480	0.2524	0.0117	0.0958	0.0782
52	-0.0189	0.0103	0.0070	-0.0795	0.8253	0:0467	-0.0456	-0.0529	-0.0916	0.0964
53	0.1154	-0.1176	0.2300	-0.0185	0.2746	-0:0945	-0.1816	-0.2162	0.1025	0.0544
54	0.0441	-0.1238	-0.0923	-0.0796	-0.0218	0:6288	-0.0070	0.0400	-0.0139	0.0237
55	0.4512	-0.1306	0.0328	-0.2049	0.1413	0:0064	-0.0265	-0.1820	-0.0220	0.0566
56	0.1038	0.0372	0.7065	-0.0946	0.0861	0:0265	-0.0783	-0.0681	0.1335	-0.0187
57	0.0538	0.1093	0.0774	-0.7097	0.0725	-0:0160	-0.0043	-0.0467	-0.1258	0.0170
58	0.0150	0.669	0.1222	-0.0514	0.0342	-0:0098	-0.0420	-0.0637	-0.1560	-0.0475

	0.7179	0.0277	-0.0551	-0.0639	0.0646	-0.0028	0.0094	-0.0383	0.1526	-0.0541
50	0.0096	-0.0629	-0.0282	-0.1769	0.0031	0.0613	-0.0636	-0.0091	0.6451	-0.0216
51	0.2919	-0.0004	0.2052	-0.0927	0.1262	-0.0142	0.0466	-0.0331	-0.0269	-0.0128
52	0.4854	0.0571	0.0094	-0.1011	-0.0888	-0.0259	-0.0459	-0.0569	0.0512	0.0480
53	0.6022	0.1128	0.0472	-0.0123	0.1063	0.0379	-0.1728	-0.0893	-0.0823	0.1561
54	0.0141	-0.0754	0.0420	-0.0776	-0.0569	0.8340	0.0047	-0.0180	0.0382	0.0441
55	0.0704	-0.0051	0.0009	-0.5816	0.0895	0.2026	-0.0099	-0.1160	0.3283	0.0598
56	-0.5886	-0.1452	0.1408	-0.0667	-0.0496	-0.0404	-0.0689	0.0020	0.0649	-0.1399
57	-0.0843	-0.1154	0.0542	0.0310	-0.1608	-0.1086	-0.1394	-0.0109	0.0507	-0.5035
58	0.1865	0.1764	0.0061	-0.0714	0.6377	0.0117	-0.0391	-0.0601	0.0174	0.0992
59	-0.0097	-0.0546	0.1405	0.1607	0.1123	-0.0361	-0.0339	-0.0008	0.0712	-0.4506
70	0.0993	0.1746	-0.0358	-0.4086	0.1785	0.1249	0.0612	0.2299	-0.1846	0.1512
71	-0.1097	-0.0183	-0.0772	-0.0137	-0.0649	-0.0874	0.1273	0.0459	0.0607	-0.6197
72	0.0420	-0.1109	0.0672	0.0202	-0.0670	-0.0593	0.0104	0.5350	0.0418	-0.2876
73	0.0208	-0.5094	0.0750	0.0783	-0.1692	0.0179	0.0142	0.0974	0.1036	-0.3122
74	0.2508	-0.0397	0.1760	-0.0550	0.0923	-0.0344	-0.0843	-0.6405	0.1193	-0.0180
75	0.0528	-0.0475	0.0091	-0.5598	0.0789	0.1655	-0.0141	-0.0371	0.1680	-0.0428
76	-0.0777	-0.1997	0.1348	-0.0158	0.0744	0.0177	-0.0134	0.4551	-0.0163	0.1070
77	0.1249	-0.3063	0.0272	-0.1690	0.0574	0.0312	0.1057	-0.0095	0.0274	0.1231
78	0.1303	-0.2886	0.1377	0.1135	0.0708	-0.1161	0.0577	0.2895	-0.1617	-0.3121
79	0.1166	-0.0635	0.0470	-0.5912	0.0859	0.0059	0.0527	-0.0600	-0.1120	0.1080
80	0.0315	-0.0715	-0.1019	-0.0524	-0.1881	0.1075	-0.0045	-0.1380	-0.1230	0.0771

	11	12	13	14	15
1	0.0580	-0.0292	-0.0937	-0.0863	0.1319
2	0.0114	0.0421	0.0098	-0.0687	-0.0282
3	-0.0203	-0.0825	0.0250	-0.2157	-0.0292
4	-0.0438	-0.0067	0.0942	-0.0398	-0.2327
5	-0.0506	0.0243	-0.0345	0.1094	0.0849
6	-0.0412	-0.1060	0.0377	-0.0349	-0.0147
7	0.0938	-0.6612	0.0059	-0.0566	-0.3517
8	-0.6961	-0.1005	-0.0093	0.0804	0.0850
9	-0.0221	-0.0797	-0.1387	-0.0618	-0.3931
10	-0.1100	-0.1266	-0.0758	-0.0526	-0.1656
11	-0.4152	0.0922	0.0584	-0.2964	-0.0198
12	0.1652	0.0265	-0.1664	0.1087	-0.0709
13	0.0522	0.0086	-0.6624	-0.1211	-0.0981
14	-0.0529	-0.1704	-0.0745	-0.0723	-0.0103
15	0.0688	-0.1430	-0.0347	0.1025	-0.2060
16	-0.1011	0.0249	-0.1042	-0.1074	0.2677
17	-0.0493	-0.0532	-0.0992	0.1391	0.1011
18	0.2429	-0.0997	0.0643	-0.2397	0.0905
19	0.0273	-0.1169	-0.2263	0.0454	0.0455
20	0.0416	-0.0126	-0.0127	0.0449	0.2390
21	-0.0799	-0.7233	-0.0473	0.0515	0.1681
22	-0.1092	-0.1236	0.0489	0.0941	0.1198
23	0.0404	-0.0379	0.1092	0.0009	-0.0691
24	0.0281	0.0611	-0.0571	0.0589	-0.0640
25	0.0324	-0.0636	-0.0078	0.0877	0.0263
26	0.7279	-0.0023	-0.0324	-0.0857	0.0621
27	0.1234	-0.0631	-0.1215	-0.4917	0.0851
28	0.0156	-0.0459	0.1051	-0.0755	-0.2607

30	0.0471	-0.0752	0.0511	-0.0576	-0.0337
31	0.0251	0.0431	-0.1870	-0.0407	0.0023
32	-0.0004	-0.0694	-0.2343	0.0164	0.0925
33	-0.1005	-0.6989	0.1120	-0.1515	-0.0136
34	-0.0142	-0.1249	0.0253	-0.0907	0.3305
35	0.0293	-0.0413	-0.0389	0.0857	0.1709
36	0.0314	0.0444	-0.6410	-0.1731	-0.0627
37	0.0212	-0.0302	0.0607	0.0578	0.0132
38	0.0069	-0.0344	-0.0434	-0.2564	-0.1411
39	0.0307	-0.0227	-0.0876	-0.0420	0.0339
40	0.0747	0.0472	-0.0072	-0.0843	0.0212
41	0.0806	0.0651	0.0780	-0.1993	0.0682
42	0.0397	0.0184	0.0732	-0.0224	0.1515
43	0.7474	0.0596	-0.1122	-0.2015	0.0242
44	0.1183	-0.0012	0.0376	0.0593	0.0151
45	0.0112	0.0982	0.1037	-0.0867	0.1608
46	0.0190	-0.0439	0.0576	-0.0544	0.4605
47	0.0640	0.0248	-0.1311	-0.5863	-0.0411
48	-0.1160	-0.0977	0.0506	-0.0534	0.1057
49	-0.1333	-0.0726	-0.0511	0.2686	0.1040
50	0.0665	-0.0219	0.0976	-0.2718	0.0995
51	0.2167	-0.1623	-0.1624	-0.3733	0.1739
52	-0.0856	0.0348	0.0245	-0.0999	0.1243
53	0.0375	-0.1405	-0.0110	-0.0819	-0.0708
54	0.0325	-0.0705	-0.1619	-0.0365	0.0422
55	0.0997	-0.0812	-0.0288	0.0478	-0.0598
56	-0.0034	-0.0838	0.0578	-0.0590	0.0098
57	0.0494	0.0366	-0.0254	-0.1090	0.0363
58	-0.0695	0.0705	0.0121	-0.0210	0.1933
59	0.0462	0.0335	0.0179	-0.2102	-0.1575

0	-0.0891	-0.0157	-0.0589	-0.1652	-0.2383
1	-0.0233	-0.0065	-0.1422	0.0469	-0.0002
62	0.0142	-0.0588	-0.1100	0.0872	0.2065
63	0.0080	-0.0805	-0.0324	-0.0022	0.0412
64	0.0042	-0.0738	-0.1542	-0.0117	0.0290
65	-0.0143	-0.0747	0.1117	-0.0298	-0.0386
66	0.0099	-0.1433	-0.1846	0.1719	0.1965
67	-0.2849	-0.0502	-0.2285	-0.0196	0.0365
68	0.0430	-0.0606	-0.0713	0.0858	-0.1940
69	0.0595	0.0379	-0.1198	0.1946	-0.0107
70	0.0547	-0.0002	-0.0073	-0.0677	-0.0398
71	0.0387	0.0269	0.0863	0.0216	0.0397
72	0.0019	0.0798	-0.0381	0.0607	0.0168
73	0.1020	0.0866	-0.0450	-0.0712	0.0670
74	0.0588	-0.0047	-0.0421	-0.0700	-0.0472
75	-0.0653	0.0172	0.2040	-0.1134	0.0297
76	-0.0052	-0.1073	-0.0029	0.1979	-0.2376
77	0.1115	-0.0649	-0.1722	-0.5844	-0.1476
78	0.0623	-0.0030	0.0485	0.0041	-0.2505
79	0.1277	0.0729	-0.1753	-0.0244	0.0308
80	0.0528	0.0510	-0.6541	-0.0178	0.0360

APPENDIX V

Description of the fifteen life-style factors derived from the eighty variables of part C of the questionnaire.

Factor 1 - fashion conscious

Question Number		Mean Score	Factor Loading
41)	Fashion in clothes is more important than comfort to me.	4.10	.70
59)	Dressing fashionably is an important part of my life.	3.24	.69
19)	I enjoy trying the latest style in hairdo's.	3.18	.66
35)	I use eye shadow or eye liner three times a week or more.	3.63	.66
63)	I have copied the way people dress on television or in magazines.	4.00	.60
66)	I dress for comfort, not for fashion.	2.39	-.56
38)	I generally have at least one outfit that is the very latest style.	2.67	.54
62)	I presently own a wig, fall or other hairpiece.	3.70	.51
55)	I have several different shades of lipstick to go with different dresses.	2.79	.44

Proportion of total variance - 5.07%

Factor 2 - poor housekeeper

Question Number		Mean Score	Factor Loading
2)	I really enjoy most forms of housework.	2.32	-.81
40)	I really enjoy cleaning my house.	2.51	-.80
58)	My idea of house cleaning is "once over lightly".	4.04	.65
73)	Keeping my home nice satisfies my creative needs.	2.43	-.51
18)	My husband compliments me on the way I run the house.	2.43	-.43
1)	I often redecorate my house or apartment.	3.06	-.42

Proportion of total variance - 4.31%

Factor 3 - careful shopper

Question Number		Mean Score	Factor Loading
37)	I study the food ads each week so I can make the best buy.	2.67	.77
17)	I shop for specials.	2.33	.72
4)	When I find a coupon in the paper, I clip it and redeem it the next time I go shopping.	3.05	.71
56)	I watch the advertisements for announcements of sales.	2.25	.70

Proportion of total variance - 3.52%

Ques. No.	
39)	
57)	
65)	
75)	
12)	
79)	
3)	
22)	

Factor 4 - disinterest in community affairs

Question Number		Mean Score	Factor Loading
39)	I like to work in community projects.	3.09	-.72
57)	I am an active member of more than one service organization.	3.76	-.70
65)	One of the duties of American women is to take an active part in community activities.	2.62	-.60
75)	Women should work for a service organization or hospital on a regular basis.	3.10	-.58
12)	One of my favorite community activities is working with boys and girls in scouting and other group activities.	3.54	-.56
79)	I like to organize community projects.	4.12	-.56
3)	I go to the women's club, church ladies' group or some other women's group which meets regularly.	3.12	-.56
22)	I have helped to collect money for the Red Cross, United Fund or March of Dimes.	2.50	-.46

Proportion of total variance - 4.51%

Factor 5 - appreciation of the arts

Question Number		Mean Score	Factor Loading
52)	I enjoy listening to classical records.	2.84	.82
45)	I generally prefer classical to the more popular forms of music.	3.16	.76
6)	I enjoy going to concerts.	2.97	.75
68)	I enjoy going through an art gallery.	2.82	.65
15)	I enjoy spending leisure time in museums.	3.22	.55

Proportion of total variance - 4.06%

Ques
Num

64)

54)

31)

Factor 6 - sports spectator

Question Number		Mean Score	Factor Loading
64)	I follow the baseball results throughout the season.	3.54	.84
54)	I like to watch or listen to baseball or football games.	3.10	.84
31)	I read the sports section of the paper.	3.53	.80

Proportion of total variance - 3.24%

Ques
Numb

25)

44)

32)

Factor 7 - do-it-yourself homemaker

Question Number		Mean Score	Factor Loading
25)	I enjoy making some of my own clothes.	2.66	.83
44)	I consider myself very good at sewing and/or knitting.	3.00	.80
32)	I enjoy fixing up and repainting old things.	2.62	.45

Proportion of total variance - 2.58%

Ques
Ans

74)

51)

34)

72)

16)

75)

-2)

Factor 8 - conservative shopper

Question Number		Mean Score	Factor Loading
74)	To me, half the fun of shopping is trying new things.	3.13	-.62
61)	I enjoy trying new products before other people do.	3.33	-.62
34)	I often buy products or brands just on impulse.	3.52	-.54
72)	I keep away from brands I've never heard of.	3.13	.51
16)	As a rule, I don't buy new products until I have heard something about them from people who have tried them.	2.88	.50
76)	I seldom buy things on impulse.	2.78	.49
42)	Once I have made a choice on brands, I am likely to use it regularly without trying any others.	2.82	.41

Proportion of total variance - 3.05%

Factor 9 - child oriented

Question Number		Mean Score	Factor Loading
24)	Parents should regularly visit their children's school and talk with their teacher.	1.86	.68
60)	Parents should be active in the P.T.A.	1.93	.67
30)	Parents should take a lot of time and effort to teach their children good habits.	1.40	.53
20)	When children are ill in bed, parents should drop most everything else in order to see to their comfort.	2.26	.50
5)	People should spend a lot of time with their children talking about their activities, friends and problems.	1.65	.49
50)	Children bring a husband and wife closer to each other.	2.31	.48

Proportion of total variance - 3.53%

Factor 10 - modern thinker

Question Number		Mean Score	Factor Loading
71)	I consider myself relatively set in my ways.	2.72	-.62
23)	I dislike any changes or interference with established ways or doing things.	3.40	-.61
67)	I often find myself thinking about the good old days.	3.29	-.49
48)	I often find myself being critical of the younger generation.	3.13	-.48
69)	I think many young parents today do not know how to bring up children properly.	2.67	-.46
49)	I feel embarrassed and uncomfortable when I am asked to entertain strangers.	3.13	-.42

Proportion of total variance - 3.62%

Factor II - energetic

Question Number		Mean Score	Factor Loading
43)	I have a lot of energy	2.76	.74
26)	I am able to work for long periods of time without feeling tired.	2.72	.73
8)	I often wonder where others get all the energy they seem to have.	2.90	-.70

Proportion of total variance - 2.77%

Factor 12 - weight conscious

Question Number		Mean Score	Factor Loading
7)	I definitely watch what I eat to keep my weight down.	2.75	.73
33)	I take advantage of low calorie foods to help me and/or my family keep our weight down.	2.92	.67
21)	I have gone on a strict diet to control my weight one or more times.	3.03	.64

Proportion of total variance - 2.42%

Factor 13 - sports participant

Question Number		Mean Score	Factor Loading
36)	I used to bowl, play tennis, golf or engage in other active sports quite often.	2.93	.70
13)	I was active in sports when I was in school.	3.01	.69
80)	I go bowling often.	4.13	.62

Proportion of total variance - 2.51%

Ques
Nu

77)

47)

27)

51)

Factor 14 - socialite

Question Number		Mean Score	Factor Loading
77)	I entertain frequently in my home.	2.78	.66
47)	We visit with friends in their home a great deal.	2.90	.61
27)	I go out to lunch with my friends quite often.	3.56	.55
51)	We generally go out for dinner at least once a week.	3.36	.47

Proportion of total variance - 2.83%

Factor 15 - self-centered

Question Number		Mean Score	Factor Loading
66)	I dress for comfort, not for fashion	2.39	-.41
46)	Parents should try to arrange their home for their children's convenience.	3.37	-.38
11)	Looking after children really demands too much of me.	3.63	.35
78)	I feel very uneasy when other people's children climb on my furniture.	2.43	.30

Proportion of total variance - 1.82%

APPENDIX VI

Output of multiple discriminant analysis for fifteen life-style factors related to two types of retail outlets.

FILLER

FILLER

FILLER

```
5.2?S     FILL                                          06/09/69    ED    0      PAGE NO.     1

                                             IDENT     FILL           K=FILLER(A,N,ICHAR)
     PROGRAM LENGTH                 00015
     ENTRY POINTS      FILLER       00000
                                             ENTRY     FILLER
     00000   63  0  00000  FILLER            UBJP      *
             00  0 P00000
     00001   56  1 P00013                    SIU       SAVE,1
             57  2 P00013                    SIL       SAVE,2
     00002   53  1 P00000                    LIL       FILLER,1
             12  1  00001                    LDA       1,1
     00003   60  0 P00007                    SAU       NUM
             01  0  00030                    ARS       24
     00004   60  0 P00011                    SAU       STORE
             12  1  00002                    LDA       2,1
     00005   01  0  00030                    ARS       24
             61  0 P00010                    SAL       ICHAR
     00006   50  2  00000                    ENI       0,2
             50  0  00000
     00007   12  0  77777  NUM               LDA       **
             11  0  77776                    INA       -1
     00010   60  0 P00012  ICHAR             SAU       INDX
             12  0  77777                    LDA       **                 LOAD CHARACTER
     00011   20  2  77777  STORE             STA       **,2
             50  0  00000
     00012   54  2  77777  INDX              ISK       **,2
             75  0 P00011                    UJP       STORE
     00013   50  1  77777  SAVE              ENI       **,1
             50  2  77777                    ENI       **,2
     00014   75  0 P00000                    SLJ       FILLER
             50  0  00000
                                             END
      00006 SYMBOLS
CAD
**BINARY DECK***
LN,1,30,2100

ECUTION STARTED AT    1231 -32

                                           GROUP  1            B2=1

      VARIABLE MEANS -

IABLE
N       1,77670   -0,81246   1,79978   -1,83503   2,11978   2,86645   1,95836   -0.07876   1,07529   -1,54705

IABLE
        0,70905    1,93310   2,22540   1,82698   -0.23905
     VARIANCES --

ARLE
ANCE    0,23875    0,31901   0,55842   0,22437    0,55368   1,18733   0.72557   0.12910   0,09917   0,12425

RLE
CE      0,53577    0,53054   0,53085   0,26828    0,07307
```

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	2,3875-001	-1,9553-003	4,4754-002	-4,7921-002	4,3677-002	3,2008-002	7,5331-002	-4,1716-002	1,0631-002	3,8643-00
1	2	-1,9553-003	3,1901-001	1,2051-002	-1,3969-002	9,0142-002	-2,9543-002	-3,3574-002	-2,8345-002	-6,4438-002	2,6152-00
1	3	4,4754-002	1,2051-002	5,5842-001	-3,3100-002	8,5278-002	7,4420-002	1,0692-001	-2,4934-002	3,0841-002	-2,5278-00
1	4	-4,7921-002	-1,3969-002	-3,3100-002	2,2437-001	-8,9031-002	9,8136-002	-7,9815-002	2,6493-002	-1,1306-002	-4,6071-00
1	5	4,3677-002	9,0142-002	8,5278-002	-8,9031-002	5,5368-001	9,9584-002	1,5328-001	-2,6768-002	-4,6309-002	5,5952-00
1	6	3,2008-002	-2,9543-002	7,4420-002	-9,8136-002	9,9584-002	1,1873+000	4,0781-002	-4,0224-002	7,9095-003	4,4440-00
1	7	7,5331-002	-3,3574-002	1,0692-001	-7,9815-002	1,5328-001	4,0781-002	7,2557-001	2,2870-002	1,5950-002	1,5516-00
1	8	-4,1716-002	-2,8345-002	-2,4934-002	2,6493-002	-2,6768-002	-4,0224-002	2,2870-002	1,2910-001	1,0026-002	-2,8260-00
1	9	1,0631-002	-6,4438-002	3,0841-002	-1,1306-002	-4,6309-002	7,9095-003	1,5950-002	1,0025-002	9,9168-002	-1,8279-00
1	10	3,8643-002	2,6152-002	-2,5278-003	-4,6071-002	5,5952-002	4,4440-002	1,5516-002	-2,8260-002	-1,8279-002	1,2425-00
1	11	5,9774-002	-8,3629-002	3,7911-003	-6,3489-002	1,6552-003	1,0657-001	4,0949-002	-6,5900-003	1,0004-002	7,5383-00
1	12	2,6007-002	2,9902-002	1,0716-001	-2,0414-002	1,2956-001	2,1460-001	1,2531-002	-5,3379-002	-2,7089-002	-3,6414-00
1	13	5,0921-002	-2,5286-002	-3,8482-002	-4,4957-002	-1,4698-002	3,2976-001	3,1835-002	-2,5850-002	9,0258-003	1,6591-00
1	14	8,5666-002	-9,3593-002	1,0974-002	-5,1561-002	1,8643-002	1,4793-001	-1,6270-002	-3,7346-002	4,0052-002	4,0590-00
1	15	3,2761-002	3,0700-002	-5,6627-003	1,5390-002	1,4411-002	-2,4124-002	-1,9170-002	-1,7267-002	-1,2509-002	7,0003-00

GROUP 2 6283

VARIABLE MEANS -

VARIABLE MEAN	1,65431	-0,79368	1,92095	-1,98288	2,11317	2,77497	1,93799	-0,04139	1,05892	-1,60182
VARIABLE MEAN	0,65424	1,96800	2,23502	1,76961	-0,27309					

VARIANCES --

VARIABLE VARIANCE	0,25791	0,28068	0,58273	0,22751	0,54710	1,16703	0,71885	0,15163	0,12123	0,15356
VARIABLE VARIANCE	0,54938	0,53895	0,59025	0,29421	0,06500					

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	2,5791-001	-1,8917-003	-1,5686-002	-4,4259-002	4,4868-002	2,7693-002	-3,5770-003	-4,9233-002	1,4512-002	3,9982-00
1	2	-1,8917-003	2,8068-001	-6,7752-002	3,4280-002	8,6457-002	-1,2685-001	-2,8422-002	-4,3866-002	-4,7208-002	-3,5773-00
1	3	-1,5686-002	-6,7752-002	5,8273-001	-7,2876-002	9,6023-003	-4,0749-002	7,6936-002	-2,6341-003	7,0707-002	-5,3078-00
1	4	-4,4259-002	3,4280-002	-7,2876-002	2,2751-001	-6,8026-002	-8,2693-002	-2,7348-002	7,8350-003	-3,9105-002	-2,0122-00
1	5	4,4868-002	8,6457-002	9,6023-003	-6,8026-002	5,4710-001	-7,9831-002	6,7821-002	-5,5072-002	4,0414-003	6,4815-00
1	6	2,7693-002	-1,2685-001	-4,0749-002	-8,2693-002	-7,9831-002	1,1670+000	-6,1914-002	1,7271-002	-1,3933-002	9,3524-00
1	7	-3,5770-003	-2,8422-002	7,6936-002	-2,7348-002	6,7821-002	-6,1914-002	7,1885-001	3,3169-002	3,2805-003	1,0549-00
1	8	-4,9233-002	-4,3866-002	-2,6341-003	7,8350-003	-5,5072-002	1,7271-002	-3,3169-002	-1,5163-001	-1,5175-002	-2,9240-00
1	9	1,4512-002	-4,7208-002	7,0707-002	-3,9105-002	4,0414-003	1,3933-002	3,2805-003	1,5175-002	1,2123-001	-8,9917-00
1	10	3,9982-002	3,5773-002	-5,3078-002	-2,0122-002	6,4815-002	-9,3524-003	-1,0549-002	-2,9240-002	-8,9917-003	1,5356-00
1	11	5,5698-002	-8,5057-002	-5,1315-002	-2,4729-002	-9,2667-003	1,2983-002	1,9286-002	-1,3804-002	9,8472-004	3,7890-00
1	12	6,9694-002	-2,2856-002	-7,9705-002	-5,5705-002	4,3140-002	2,2072-002	5,9644-002	-1,5418-002	3,0483-002	-1,8558-00
1	13	6,6125-002	-5,3624-002	-2,0381-002	-3,3721-002	-2,0127-002	2,8466-001	-6,8401-003	-2,0462-002	1,7789-002	1,8070-00
1	14	7,6827-002	-7,3030-002	-3,8351-002	-7,1703-002	3,0028-002	8,0693-002	-6,2789-002	-2,2654-002	1,8435-002	3,1401-00
1	15	4,9056-002	3,0559-002	-2,4502-002	1,1985-002	8,5020-003	-1,6244-002	-3,3810-002	-1,8893-002	-2,4455-002	2,0430-00

TABLE OFCOMPARA TIVE MEANS-ON-THIS-RUN

SECTION LABEL ROW

		B2=1	B2=3
1	1	1,7767+000	1,6543+000
1	2	-8,1246-001	-7,9368-001
1	3	1,7998+000	1,9269+000
1	4	-1,8350+000	-1,9829+000
1	5	2,1198+000	2,1132+000
1	6	2,8865+000	2,7750+000
1	7	1,9584+000	1,9380+000
1	8	-7,8760-002	-4,1297-002
1	9	1,0753+000	1,0589+000
1	10	-1,5470+000	-1,6018+000
1	11	7,0905-001	6,5424-001
1	12	1,9331+000	1,9680+000
1	13	2,2254+000	2,2330+000
1	14	1,8270+000	1,7696+000
1	15	-2,3905-001	-2,7309-001

POOLED COVARIANCE MATRIX

SECTION LABEL ROW

1	1	2,5174-001	-1,9122-003	3,7821-003	-4,5438-002	4,4484-002	2,9083-002	2,1840-002	-4,6812-002	1,3262-002	3,9550-0
1	2	-1,9122-003	2,9302-001	-4,2047-002	-1,8738-002	8,7644-002	-9,5510-002	-3,0081-002	-3,8866-002	-5,2758-002	-3,2674-0
1	3	3,7821-003	-4,2047-002	5,7490-001	-6,0064-002	3,3978-002	-3,6522-003	8,6594-002	-9,8169-003	5,7866-002	-3,6795-0
1	4	-4,5438-002	1,8738-002	-6,0064-002	2,2650-001	-7,4792-002	-8,7667-002	-4,4248-002	1,3845-002	-3,0151-002	-2,8480-0
1	5	4,4484-002	8,7644-002	3,3978-002	-7,4792-002	5,4922-001	-2,2040-002	9,5348-002	-4,5955-002	-1,2177-002	6,1960-0
1	6	2,9083-002	-9,5510-002	-3,6522-003	-8,7667-002	-2,2040-002	1,1736+000	-2,8835-002	-1,2486-003	1,2019-002	2,0654-0
1	7	2,1840-002	-3,0081-002	8,6594-002	-4,4248-002	9,5348-002	-2,8835-002	7,2102-001	2,9852-002	7,3614-003	1,2149-0
1	8	-4,6812-002	-3,8866-002	-9,8169-003	1,3845-002	-4,5955-002	-1,2486-003	2,9852-002	1,4437-001	1,3517-002	-2,6347-0
1	9	1,3262-002	-5,2758-002	5,7866-002	-3,0151-002	-1,2177-002	1,2019-002	7,3614-003	1,3517-002	1,1413-001	-1,1983-0
1	10	3,9550-002	3,2674-002	-3,6795-002	-2,8480-002	6,1960-002	2,0654-002	1,2149-002	-2,6347-002	-1,1983-002	1,4412-0
1	11	5,7011-002	-8,4597-002	-3,3505-002	-3,7213-002	-5,7623-003	4,3127-002	2,6264-002	-1,1480-002	4,0631-003	4,9971-0
1	12	5,5622-002	-5,8623-003	8,8547-002	-4,4338-002	7,0978-002	8,4086-002	4,4468-002	-2,7645-002	1,1745-002	-1,3753-0
1	13	6,1228-002	-4,4496-002	-2,6212-002	-3,7340-002	-1,8378-002	2,9919-001	5,6175-003	-2,2197-002	1,4966-002	1,7594-0
1	14	7,9674-002	-7,9653-002	-2,2463-002	-6,5215-002	2,6361-002	-1,0235-001	-4,7805-002	-2,7386-002	-2,5591-002	-3,4361-0
1	15	4,3807-002	3,0604-002	-1,8488-002	1,3082-002	1,0426-002	-1,8782-002	-2,9094-002	-1,8369-002	-2,0603-002	1,6130-0

COVARIANCE MATRICES WERE POOLED

TABLE OF COMPARATIVE WEIGHTS ON THIS RUN

SECTION LABEL ROW

	B2=1	B2=3
1	5,5424+000	5.0477+000
2	1,8878+000	1.9466+000
3	8,9406-001	1.0569+000
4	-4,0471+000	-4.9805+000
5	3,9721+000	3.9097+000
6	1,5392+000	1.3630+000
7	2,1444+000	2.0401+000
8	9,2043-001	1.1194+000
9	4,9354+000	4.5029+000
10	-1,6261+001	-1.6554+001
11	1,0335+000	9.9955-001
12	9,3824-001	1.0142+000
13	1,9724+000	2.1431+000
14	4,3787+000	4.2178+000
15	-6,9550-001	-7.8405-001

CONSTANTS FOR ALL GROUPS

GROUP	B2=1	B2=3
CONSTANT	39,95215	40,53337

RESULTS OF DISPERSION TEST -----ORIGINAL BY ASSIGNED

SECTION LABEL	ROW	B2=1	B2=3
1 B2=1	1	100	54
1 B2=3	2	121	202

APPENDIX VII

Output of multiple discriminant analysis for twenty-one life-style and demographic factors related to style of furniture purchased.

```
                                        IDENT    FILL              K=FILLER(A,N,ICHAR)

PROGRAM LENGTH              00015
ENTRY POINTS    FILLER      00000

                                        ENTRY    FILLER
  00000    63  0  00000  FILLER   UBJP     *
           00  0 P00000
  00001    56  1 P00013             SIU      SAVE,1
           57  2 P00013             SIL      SAVE,2
  00002    53  1 P00000             LIL      FILLER,1
           12  1  00001             LDA      1,1
  00003    60  0 P00007             SAU      NUM
           01  0  00030             ARS      24
  00004    60  0 P00011             SAU      STORE
           12  1  00002             LDA      2,1
  00005    01  0  00030             ARS      24
           61  0 P00010             SAL      ICHAR
  00006    50  2  00000             ENI      0,2
           50  0  00000
  00007    12  0  77777  NUM        LDA      **
           11  0  77776             INA      -1
  00010    60  0 P00012  ICHAR      SAU       INDX
           12  0  77777             LDA      **                LOAD CHARACTER
  00011    20  2  77777  STORE      STA      **,2
           50  0  00000
  00012    54  2  77777  INDX       ISK      **,2
           75  0 P00011             UJP      STORE
  00013    50  1  77777  SAVE       ENI      **,1
           50  2  77777             ENI      **,2
  00014    75  0 P00000             SLJ      FILLER
           50  0  00000
                                    END

   00006 SYMBOLS
LOAD
***BINARY DECK***
RUN,1,30,2100

EXECUTION STARTED AT   2323 -07

                                        GROUP  1          B3=1

      VARIABLE MEANS --

ARIABLE
EAN        2,07558     2,05233     3,04651     3,58140     1,09302     3,75581     1,69115    -0,71273     1,79422    -1,89758

NRIABLE
EAN        2,09415     2,59192     1,79374    -0,05796     1,01185    -1,56239     0,73206     1,96653     2,17615     1,75917

IRIABLE
AN        -0,25203
      VARIANCES --

RIABLE
RIANCE     0,10537     0,55280     0,96858     1,33252     0,08494     1,44880     0,23816     0,27145     0,53843     0,22086

NIABLE
```

VARIANCE	0.51965	1.27597	0.72406	0.16119	0.10010	0.15665	0.58440	0.57359	0.57467	0.28614
VARIABLE VARIANCE	0.07183									

2.3235-002 -6.1039-00

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	1.3537-001	-3.9066-002	1.4008-002	-3.2640-003	1.0472-002	-1.2179-001	-1.2730-002	-2.6740-002	2.3235-002	-6.1839-00
1	2	-3.9066-002	5.5280-001	-3.2409-001	-3.0600-002	-4.8960-003	-8.6563-002	6.8929-003	-9.5464-002	-5.1865-002	-3.1496-00
1	3	1.4008-002	-3.2409-001	9.6858-001	-2.7866-001	-5.1136-002	1.2254-001	1.2724-001	3.6835-002	-8.2268-002	1.1295-00
1	4	-3.2640-003	-3.0600-002	-2.7866-001	1.3325+000	4.0800-003	5.2292-001	-7.3132-002	-8.9940-002	9.6245-002	7.2235-00
1	5	1.0472-002	-4.8960-003	-5.1136-002	4.0800-003	8.4863-002	-3.5632-002	-2.4183-002	-1.6551-002	3.5301-002	-2.7618-00
1	6	-1.2179-001	-8.6563-002	1.2254-001	5.2292-001	-3.5632-002	1.4488+000	-8.4391-002	-2.1221-002	1.9610-001	1.3494-00
1	7	-1.2730-002	6.8929-003	1.2724-001	-7.3132-002	-2.4183-002	-8.4391-002	2.3816-001	1.0079-002	-2.3283-002	-3.2069-00
1	8	-2.6740-002	-9.5464-002	3.6835-002	-8.9940-002	-1.6551-002	-2.1221-002	1.0079-002	2.7145-001	-3.9663-002	3.8294-00
1	9	2.3235-002	-5.1865-002	-8.2268-002	9.6245-002	3.5301-002	1.9610-001	-2.3283-002	-3.9663-002	5.3843-001	-4.2999-00
1	10	-6.1839-003	-3.1496-002	1.1295-001	7.2235-002	-2.7618-002	1.3494-001	-3.2069-002	3.8294-002	-4.2999-002	2.2086-00
1	11	9.7370-003	3.3232-002	-7.5644-002	-2.9417-001	2.1916-002	-1.3408-001	6.2414-002	-7.3438-002	4.4003-002	-7.9509-00
1	12	2.8375-002	7.7297-002	-1.2734-001	-2.5356-002	-3.1133-002	-2.3374-001	-3.3662-002	-2.5846-002	-2.2451-002	-1.0971-00
1	13	-7.4958-004	-4.6296-002	9.1199-002	-1.3279-001	2.4972-002	4.5573-002	9.9939-003	-9.7682-002	8.3668-002	-2.7304-00
1	14	1.1675-002	-8.2653-003	-3.5546-002	1.9842-002	7.6453-003	2.3987-002	-4.4933-002	-4.0265-002	-2.5129-002	-6.3563-00
1	15	1.5203-003	3.7172-002	-2.3320-002	4.1667-002	-1.0151-003	3.9536-002	1.2393-003	-1.1808-002	1.9613-002	-1.8716-00
1	16	-2.3552-003	1.8915-002	-1.2356-002	-1.1750-001	5.6914-003	-1.0832-001	5.0878-002	3.7613-002	-1.7468-002	-2.8755-00
1	17	4.5580-002	-3.9074-002	1.3566-001	-1.1253-001	-2.8481-003	-2.4122-001	5.5047-002	-9.0951-002	1.6268-002	-4.7836-00
1	18	-3.7812-002	1.5332-001	-2.1627-001	3.1737-002	4.0908-003	-7.5584-002	4.1308-002	-7.5839-002	1.1825-001	-7.0890-00

PAGE NO.

-3.7881-002 -7.0921-002 -3.1362-0

COVARIANCE MATRIX

SECTION LABEL ROW

1	19	2,7497-002	2,1758-002	1,0074-001	-6,3153-002	6,2666-003	-3,5711-002	5,5578-002	-5,7881-002	-7,0921-002	-3,1369-00
1	20	-2,5391-003	9,4447-002	-1,2733-002	-6,2900-002	-1,2322-003	-1,1336-001	6,6609-002	-7,3456-002	-3,3174-002	-8,8462-00
1	21	-9,5280-003	1,8611-002	9,2030-004	-3,5078-002	-1,0832-002	-2,9064-002	5,4489-002	3,7757-002	-3,4791-002	1,1862-00

GROUP 2 B3=2

VARIABLE MEANS --

VARIABLE MEAN	2,12000	1,84000	3,20000	3,80000	1,09333	4,14667	1,63412	-0,77516	1,91891	-1,88716
VARIABLE MEAN	1,96659	2,86516	2,10519	-0,07881	1,08757	-1,60163	0,64843	1,86579	2,17812	1,57967
VARIABLE MEAN	-0,26583									

VARIANCES --

VARIABLE VARIANCE	0,26919	0,59568	0,67968	1,40541	0,08577	1,50523	0,25260	0,27703	0,59201	0,25015
VARIABLE VARIANCE	0,58267	0,99399	0,78424	0,16427	0,11650	0,18913	0,64589	0,60215	0,73518	0,34305
VARIABLE VARIANCE	0,05353									

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	2,5919-001	5,9459-003	-1,0811-002	-2,7027-003	-2,4865-002	-1,3946-001	4,0395-003	-3,4386-002	7,0282-002	3,4992-00
1	2	5,9459-003	5,9568-001	-2,7838-001	-5,4054-003	-6,5946-002	1,3189-001	-6,8332-002	-1,1175-002	-8,2475-002	6,8659-00
1	3	-1,0811-002	-2,7838-001	6,7568-001	-1,8919-001	-3,2432-002	-1,6216-002	1,0196-001	4,0222-002	-6,8792-002	4,5330-00
1	4	-2,7027-003	-5,4054-003	-1,8919-001	1,4054-000	4,5946-002	4,8919-001	-1,0406-001	-9,1789-002	4,8454-002	1,3566-00
1	5	-2,4865-002	-6,5946-002	-3,2432-002	4,5946-002	8,5766-002	1,3153-002	-3,2538-002	-1,1539-002	1,5955-002	-1,6931-00
1	6	-1,3946-001	1,3189-001	-1,6216-002	4,8919-001	1,3153-002	1,5052-000	-6,0707-002	-4,3557-002	1,4437-001	4,6848-00
1	7	4,0395-003	-6,8332-002	1,0196-001	-1,0406-001	-3,2538-002	-6,0707-002	2,5260-001	-3,4607-002	5,3032-002	-8,7709-00
1	8	-3,4386-002	-1,1175-002	4,0222-002	-9,1789-002	-1,1539-002	-4,3557-002	-3,4607-002	6,7703-001	-3,8917-002	2,1750-00
1	9	7,0282-002	-8,2475-002	-6,8792-002	4,8454-002	1,5955-002	1,4437-001	5,3032-002	-3,8917-002	5,9201-001	-2,8019-00
1	10	3,4992-002	6,8659-003	4,5330-002	1,3566-001	-1,4931-002	4,6848-002	-8,7709-002	6,1750-002	-2,8019-002	2,5015-00
1	11	4,1956-002	-2,6013-002	-3,2227-002	-2,5504-001	-2,2717-003	-2,0703-001	8,0040-003	2,3545-002	5,5778-002	-7,2060-00
1	12	-3,1898-002	1,5330-001	-3,1341-001	1,4383-001	-2,5988-002	1,5517-001	4,3623-002	-1,3895-001	-9,0381-002	-1,2693-00
1	13	-2,2698-002	-1,9410-001	2,1906-001	6,0186-002	3,2807-002	3,3843-001	5,6299-002	9,8954-002	6,4954-002	-3,6089-00
1	14	5,2476-003	-2,7510-002	-2,7541-003	1,0232-001	8,8742-003	1,5003-001	-3,4223-002	5,9309-003	8,8079-003	2,8103-00
1	15	-9,2184-003	-5,9881-003	-3,6103-002	5,4270-003	1,1554-002	3,4550-002	1,9519-002	-7,1710-002	1,1213-001	-2,6587-00
1	16	8,7249-003	-2,2304-002	1,4083-001	-1,6742-001	-1,0630-002	-2,0704-002	4,2130-002	-8,6175-003	-8,1712-002	-1,7099-00
1	17	-6,5295-002	-7,7390-002	7,7043-002	3,1749-002	-8,4593-003	-1,5089-001	3,2963-002	-1,4686-001	-9,1200-002	-1,8232-00
1	18	-9,6497-003	1,6733-001	-1,6056-001	5,7051-002	2,2399-002	7,8964-002	5,2270-002	1,3222-002	7,5445-002	-7,7114-00

1	19	-1,1778-001	2,7627-003	-3,4700-002	2,1373-001	4,0137-002	-4,6612-002	3,7605-002	-2,6139-002	-3,6218-002	2,4240-00
1	20	-1,8514-002	1,2127-001	-3,0595-002	-9,1243-002	-1,9104-002	-1,6175-001	1,0324-001	-1,4896-001	1,2603-003	-7,4599-00
1	21	1,4077-002	-2,6260-002	1,9038-002	9,3946-003	-3,5814-003	2,4316-002	4,7503-003	1,0690-004	7,3017-003	1,7398-00

GROUP 3 B3=3

VARIABLE MEANS =

VARIABLE MEAN	2,01695	1,99576	3,00000	3,50000	1,08051	3,65254	1,74431	-0,87375	1,89750	-1,97411
VARIABLE MEAN	2,18432	2,94326	1,94194	-0,05608	1,07032	-1,58440	0,64058	2,01750	2,31741	1,88090
VARIABLE MEAN	-0,26257									

VARIANCES --

VARIABLE VARIANCE	0,09333	0,54892	0,97021	1,26383	0,07434	1,43621	0,25038	0,31585	0,56450	0,23431
VARIABLE VARIANCE	0,57509	1,15197	0,69489	0,13329	0,11923	0,12824	0,52225	0,53636	0,52879	0,24957
VARIABLE VARIANCE	0,06863									

1 9.3329-002 -2.1204-002 1.7021-002 -2.9787-002 -1.3704-003 -7.0682-003 [illegible]

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	9.3329-002	-2.1204-002	1.7021-002	-2.9787-002	-1.3704-003	-7.0682-002	-4.8477-003	-1.0978-003	-2.1021-003	7.6869-00
1	2	-2.1204-002	5.4892-001	-1.9574-001	5.3191-002	-2.0934-002	1.8576-001	1.5972-002	-2.5505-002	-4.4619-002	7.2306-00
1	3	1.7021-002	-1.9574-001	9.7021-001	-1.9149-001	-5.9574-002	-8.0851-002	1.1513-001	9.8898-002	-4.3379-002	3.3102-00
1	4	-2.9787-002	5.3191-002	-1.9149-001	1.2638+000	1.0638-002	5.6170-001	-1.0614-001	-1.8961-001	1.6281-002	7.4253-00
1	5	-1.3704-003	-2.0934-002	-5.9574-002	1.0638-002	7.4342-002	-8.2546-002	2.7746-004	-1.7526-002	-6.7213-003	-9.4978-00
1	6	-7.0682-002	1.8576-001	-8.0851-002	5.6170-001	-8.2546-002	1.4362+000	-1.1757-001	-1.2990-001	1.6506-001	8.4618-00
1	7	-4.8477-003	1.5972-002	1.1513-001	-1.0614-001	2.7746-004	-1.1757-001	2.5038-001	-2.9536-002	1.0178-002	-2.9685-00
1	8	-1.0978-003	-2.5505-002	9.8898-002	-1.8961-001	-1.7526-002	-1.2990-001	-1.9536-002	9.1585-001	-2.4384-002	-7.2446-00
1	9	-2.1021-003	-4.4619-002	-4.3379-002	1.6281-002	-6.7213-003	1.6506-001	1.0178-002	-2.4384-002	5.6450-001	-7.5296-00
1	10	7.6869-003	7.2306-002	3.3102-002	7.4253-002	-9.4978-003	8.4618-002	-2.9685-002	-7.2446-003	-7.5296-002	2.3431-00
1	11	-3.9863-003	2.5695-002	-1.6136-002	-1.9352-001	-2.5839-002	-7.5649-002	2.9113-002	1.2379-001	1.1208-002	-5.8981-00
1	12	-2.5302-002	7.4163-002	6.1617-003	-9.5964-002	-2.1174-002	1.0120-002	5.0269-002	-9.4651-002	6.5058-003	-2.4406-00
1	13	5.3373-003	5.1274-003	7.7536-002	-8.5802-002	-2.0510-002	2.1527-002	5.2934-002	-9.7070-002	9.8051-002	-4.1499-00
1	14	-3.7221-003	2.3289-002	-4.4311-002	4.2847-002	8.0402-003	1.0237-002	-5.0262-002	-4.0353-002	3.9271-003	1.5339-00
1	15	-6.9204-003	-1.0267-002	3.1574-003	5.9149-002	3.4463-003	5.9500-002	2.0327-002	-4.4008-002	5.9063-002	-2.9567-00
1	16	7.9749-003	-1.4027-002	1.3868-002	-7.6860-002	-2.3390-003	-8.5645-002	2.3346-002	-9.5579-002	-2.7252-002	-3.1523-00
1	17	5.2881-003	-2.5708-002	7.8021-002	-8.4204-002	-2.5774-002	-5.2799-002	7.2301-002	-8.0745-002	-3.2945-002	-3.6044-00
1	18	8.5446-003	1.2070-002	-1.1123-001	-6.0702-003	1.7975-003	-4.2496-003	4.0660-002	5.0619-003	5.2393-002	-2.2265-00

CUSTOMER LENGTH FILLER

00012 FLNT FILL
00000 ENTRY FILLER

```
                                        IDENT     FILL              K=FILLER(A,N,ICHAR)

      PROGRAM LENGTH              00015
      ENTRY POINTS    FILLER      00000
                                        ENTRY     FILLER
        00000   63  0  00000  FILLER   UBJP      *
                00  0 P00000
        00001   56  1 P00013            SIU       SAVE,1
                57  2 P00013            SIL       SAVE,2
        00002   53  1 P00000            LIL       FILLER,1
                12  1  00001            LUA       1,1
        00003   60  0 P00007            SAU       NUM
                01  0  00030            ARS       24
        00004   60  0 P00011            SAU       STORE
                12  1  00002            LUA       2,1
        00005   01  0  00030            ARS       24
                61  0 P00010            SAL       ICHAR
        00006   50  2  00000            ENI       0,2
                50  0  00000
        00007   12  0  77777  NUM       LUA       **
                11  0  77776            INA       -1
        00010   60  0 P00012  ICHAR     SAU        INDX
                12  0  77777            LUA       **                LOAD CHARACTER
        00011   20  2  77777  STORE     STA       **,2
                50  0  00000
        00012   54  2  77777  INDX      ISK       **,2
                75  0 P00011            UJP       STORE
        00013   50  1  77777  SAVE      ENI       **,1
                50  2  77777            ENI       **,2
        00014   75  0 P00000            SLJ       FILLER
                50  0  00000
                                        END

         00006 SYMBOLS
LOAD
***BINARY DECK***
RUN,1,30,2100

EXECUTION STARTED AT   2323 -07

                                                  GROUP  1          B3=1

        VARIABLE MEANS -

RIABLE
AN        2,07558     2,05233     3,04651     3,58140     1,09302     3,75581     1,69115     -0,71273    1,79422     -1,89758

RIABLE
AN        2,09415     2,59192     1,79374     -0,05796    1,01185     -1,56239    0,73206     1,96653     2,17615     1,75917

IABLE
N       -0,25203
      VARIANCES --

ABLE
ANCE      0,10537     0,55280     0,96858     1,33252     0,08486     1,44880     0,23816     0,27145     0,53843     0,22086

ABLE
```

VARIANCE	0.51965	1.27597	0.72406	0.16119	0.10010	0.15665	0.58440	0.57359	0.57467	0.28614
VARIABLE VARIANCE	0.07183									

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	1.0537-001	-3.9066-002	1.4008-002	-3.2640-003	1.0472-002	-1.2179-001	-1.2730-002	-2.6740-002	2.3235-002	-6.1839-00
1	2	-3.9066-002	5.5280-001	-3.2409-001	-3.0600-002	-4.8960-003	-8.6563-002	6.8929-003	-3.5464-002	-5.1865-002	-3.1496-00
1	3	1.4008-002	-3.2409-001	9.6858-001	-2.7866-001	-5.1136-002	1.2254-001	1.2724-001	3.6835-002	-8.2268-002	1.1295-00
1	4	-3.2640-003	-3.0600-002	-2.7866-001	1.3325+000	4.0800-003	5.2292-001	-7.3132-002	-6.9940-002	9.6245-002	7.2235-00
1	5	1.0472-002	-4.8960-003	-5.1136-002	4.0800-003	8.4863-002	-3.5632-002	-2.4183-002	-1.6551-002	3.5301-002	-2.7618-00
1	6	-1.2179-001	-8.6563-002	1.2254-001	5.2292-001	-3.5632-002	1.4488+000	-8.4391-002	-2.1221-002	1.9610-001	1.3494-00
1	7	-1.2730-002	6.8929-003	1.2724-001	-7.3132-002	-2.4183-002	-8.4391-002	2.3816-001	1.0079-002	-2.3283-002	-3.2060-00
1	8	-2.6740-002	-3.5464-002	3.6835-002	-6.9940-002	-1.6551-002	-2.1221-002	1.0079-002	2.7145-001	-3.9663-002	3.8294-00
1	9	2.3235-002	-5.1865-002	-8.2268-002	9.6245-002	3.5301-002	1.9610-001	-2.3283-002	-3.9663-002	5.3843-001	-4.2999-00
1	10	-6.1839-003	-3.1496-002	1.1295-001	7.2235-002	-2.7618-002	1.3494-001	-3.2060-002	3.8294-002	-4.2999-002	2.2086-00
1	11	9.7370-003	3.3232-002	-7.5644-002	-2.9417-001	2.1916-002	-1.3408-001	6.2414-002	7.3438-002	4.4003-002	-7.9509-00
1	12	2.8375-002	7.7297-002	-1.2754-001	-2.5356-002	-3.1133-002	-2.3374-001	-3.3662-002	-2.5846-002	-2.2451-002	-1.0971-00
1	13	-7.5958-004	-4.6296-002	9.1199-002	-1.3279-001	2.4972-002	4.5573-002	9.9939-003	-5.7682-002	8.3668-002	-2.7304-00
1	14	1.0675-002	-8.2653-003	-3.5546-002	1.9842-002	7.6453-003	2.3987-002	-4.4933-002	-4.0265-002	-2.5129-002	-6.3563-00
1	15	1.5203-003	3.7172-002	-2.3320-002	4.1667-002	-1.0151-003	3.9536-002	1.2393-003	-2.1808-002	1.9613-002	-1.8716-00
1	16	-2.5552-003	1.8915-002	-1.2356-002	-1.1750-001	5.6914-003	-1.0832-001	5.0878-002	3.7613-002	-1.7468-002	-2.8755-00
1	17	4.5580-002	-3.9074-002	1.3566-001	-1.1253-001	-2.8481-003	-2.4122-001	5.5047-002	-9.0951-002	1.6268-002	-4.7836-00
1	18	-3.7812-002	1.5332-001	-2.1627-001	3.1737-002	4.0908-003	-7.5584-002	4.1308-002	-7.5839-002	1.1825-001	-7.0890-00

19	2.7497-002	2.1758-002	1.0074-001	-6.3153-002	6.2666-003	-3.5711-002	5.3578-002	-5.7881-002	-7.0921-002	-3.1369-01
20	-2.5391-003	9.4447-002	-1.2733-002	-6.2900-002	-1.2322-003	-1.1336-001	6.6609-002	-7.3456-002	-3.3174-002	-8.8462-01

COVARIANCE MATRIX

SECTION LABEL ROW

1	19	2,7497-002	2,1758-002	1,0074-001	-6,3153-002	6,2666-003	-3,5711-002	5,5578-002	-5,7881-002	-7,0921-002	-5,1369-00
1	20	-2,5391-003	9,4447-002	-1,2733-002	-6,2900-002	-1,2322-003	-1,1336-001	6,6609-002	-7,3456-002	-3,3174-002	-8,8462-00
1	21	-9,5280-003	1,8611-002	9,2030-004	-3,5078-002	-1,0832-002	-2,9064-002	5,4489-002	3,7757-002	-3,4791-002	1,1882-00

GROUP 2 B3=2

VARIABLE MEANS -

VARIABLE MEAN	2,12000	1,84000	3,20000	3,80000	1,09333	4,14667	1,63412	-0,77516	1,91891	-1,88716
VARIABLE MEAN	1,96659	2,86516	2,10519	-0,07881	1,08757	-1,60163	0,64843	1,86579	2,17812	1,57967
VARIABLE MEAN	-0,26583									

VARIANCES --

VARIABLE VARIANCE	0,26919	0,59568	0,67568	1,40541	0,08577	1,50523	0,25260	0,27703	0,59201	0,25015
VARIABLE VARIANCE	0,58267	0,99399	0,78424	0,16427	0,11650	0,18913	0,64589	0,60215	0,73518	0,34305
VARIABLE VARIANCE	0,05353									

PAGE NO.

-3.4386-002 7.0282-002 3.4992-

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	2.5919-001	5.9459-003	-1.0811-002	-2.7027-003	-2.4865-002	-1.3946-001	4.0395-003	-3.4386-002	7.0282-002	3.4992-00
1	2	5.9459-003	5.9568-001	-2.7858-001	-5.4054-003	-6.5946-002	1.3189-001	-6.8332-002	-1.1175-002	-8.2475-002	6.8659-00
1	3	-1.0811-002	-2.7858-001	6.7568-001	-1.8919-001	-3.2432-002	-1.6216-002	1.0196-001	4.0222-002	-6.8792-002	4.5330-00
1	4	-2.7027-003	-5.4054-003	-1.8919-001	1.4054+000	4.5946-002	4.8919-001	-1.0406-001	-9.1789-002	4.8454-002	1.3566-00
1	5	-2.4865-002	-6.5946-002	-3.2432-002	4.5946-002	8.5766-002	1.3153-002	-3.2538-002	-1.1539-002	1.5955-002	-1.6931-00
1	6	-1.3946-001	1.3189-001	-1.6216-002	4.8919-001	1.3153-002	1.5052+000	-6.0707-002	-2.3557-002	1.4437-001	4.6848-00
1	7	4.0395-003	-6.8332-002	1.0196-001	-1.0406-001	-3.2538-002	-6.0707-002	2.5260-001	-2.4607-002	5.3032-002	-8.7709-00
1	8	-3.4386-002	-1.1175-002	4.0222-002	-9.1789-002	-1.1539-002	-2.3557-002	-3.4607-002	4.7703-001	-3.8917-002	2.1750-00
1	9	7.0282-002	-8.2475-002	-6.8792-002	4.8454-002	1.5955-002	1.4437+001	5.3032-002	-9.8917-002	5.9201-001	-2.8019-00
1	10	3.4992-002	6.8659-003	4.5330-002	1.3566-001	-1.6931-002	4.6848-002	-8.7709-002	2.1750-002	-2.8019-002	2.5015-00
1	11	4.1956-002	-2.6013-002	-3.2227-002	-2.5504-001	-2.2717-003	-2.0703-001	8.0040-003	2.3545-002	5.5778-002	-7.2060-00
1	12	-3.1898-002	1.5330-001	-3.1341-001	1.4383-001	-2.5988-002	1.5517+001	4.3623-002	-1.3895-001	-9.0381-002	-1.2693-00
1	13	-2.2698-002	-1.9410-001	2.1906-001	6.0186-002	3.2807-002	3.3843+001	5.6299-002	9.8954-002	6.4954-002	-3.6089-00
1	14	5.2476-003	-2.7510-002	-2.7541-003	1.0232-001	8.8742-003	1.5003+001	-3.4223-002	5.9309-003	8.8079-003	2.8103-00
1	15	-9.2184-003	-5.9881-003	-3.6103-002	5.4270-003	1.1554-002	3.4550-002	1.9519-002	-2.1710-002	1.1213-001	-2.6587-00
1	16	8.7249-003	-2.2304-002	1.4083-001	-1.6742-001	-1.0630-002	-2.0704-002	4.2130-002	-2.6175-003	-8.1712-002	-1.7099-00
1	17	-6.5295-002	-7.7390-002	7.7043-002	3.1749-002	-8.4593-003	-1.5089-001	3.2963-002	-1.4686-001	-9.1200-002	-1.8232-00
1	18	-9.5497-003	1.6733-001	-1.6056-001	5.7051-002	2.2399-002	7.8964-002	5.2270-002	1.3222-002	7.5445-002	-7.7114-00

COVARIANCE MATRIX

SECTION LABEL ROW

1	19	-1.1778-001	2.7627-003	-3.4700-002	2.1373-001	4.0137-002	-4.6612-002	3.7605-002	-2.6139-002	-3.6218-002	2.4240-00
1	20	-1.9514-002	1.2127-001	-3.0595-002	-9.1243-002	-1.9104-002	-1.6175-001	1.0324-001	-4.4896-001	1.2603-003	-7.4599-00
1	21	1.4077-002	-2.6260-002	1.9058-002	9.3946-003	-3.5814-003	2.4316-002	4.7503-003	1.0690-004	7.3017-003	1.7398-00

GROUP 3 B3=3

VARIABLE MEANS -

VARIABLE MEAN	2.01693	1.99576	3.00000	3.50000	1.08051	3.65254	1.74431	-0.87375	1.89750	-1.97411
VARIABLE MEAN	2.18432	2.94326	1.94194	-0.05608	1.07032	-1.58440	0.64058	2.01750	2.31741	1.88090
VARIABLE MEAN	-0.26257									

VARIANCES --

VARIABLE VARIANCE	0.09333	0.54892	0.97021	1.26383	0.07434	1.43621	0.25038	0.31585	0.56450	0.23431
VARIABLE VARIANCE	0.57509	1.15197	0.69489	0.13329	0.11923	0.12824	0.52225	0.53636	0.52879	0.24957
VARIABLE VARIANCE	0.06863									

1 1 2.3133-002 2.1291-002 1.7621-002 -3.2781-003 -1.1704-003 -7.0682-003 -1.8477-003 -1.0878-003 -2.1021-003 7.6869-00

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	9.3329-002	-2.1204-002	1.7021-002	-2.9787-002	-1.3704-003	-7.0682-002	-4.8477-003	-1.0978-003	-2.1021-003	7.6869-00
1	2	-2.1204-002	5.4892-001	-1.9574-001	5.3191-002	-2.0934-002	1.8576-001	1.5972-002	-2.5505-002	-4.4619-002	7.2306-00
1	3	1.7021-002	-1.9574-001	9.7021-001	-1.9149-001	-5.9574-002	-8.0851-002	1.1513-001	9.8898-002	-4.3379-002	3.3102-00
1	4	-2.9787-002	5.3191-002	-1.9149-001	1.2638+000	1.0638-002	5.6170-001	-1.0614-001	-1.8961-001	1.6281-002	7.4253-00
1	5	-1.3704-003	-2.0934-002	-5.9574-002	1.0638-002	7.4342-002	-8.2546-002	2.7746-004	-1.7526-002	-6.7213-003	-9.4978-00
1	6	-7.0682-002	1.8576-001	-8.0851-002	5.6170-001	-8.2546-002	1.4362+000	-1.1757-001	-1.2990-001	1.6506-001	8.4618-00
1	7	-4.8477-003	1.5972-002	1.1513-001	-1.0614-001	2.7746-004	-1.1757-001	2.5038-001	-2.9536-002	1.0178-002	-2.9685-00
1	8	-1.0978-003	-2.5505-002	9.8898-002	-1.8961-001	-1.7526-002	-1.2990-001	-1.9536-002	9.1585-001	-2.4384-002	-7.2446-00
1	9	-2.1021-003	-4.4619-002	-4.3379-002	1.6281-002	-6.7213-003	1.6506-001	1.0178-002	-2.4384-002	5.6450-001	-7.5296-00
1	10	7.6869-003	7.2306-002	3.3102-002	7.4253-002	-9.4978-003	8.4618-002	-2.9685-002	-7.2446-003	-7.5296-002	2.3431-00
1	11	-3.0863-003	2.5695-002	-1.6156-002	-1.9352-001	-2.5839-002	-7.5649-002	2.9113-002	1.2379-001	1.1208-002	-5.8981-00
1	12	-2.5302-002	7.4163-002	6.1617-003	-9.5964-002	-2.1174-002	1.0120-002	5.0269-002	-9.4651-002	6.5058-003	-2.4406-00
1	13	5.3373-003	5.1274-003	7.7536-002	-8.5802-002	-2.0510-002	2.1527-002	5.2934-002	-5.7070-002	9.8051-002	-4.1499-00
1	14	-3.7221-003	2.3289-002	-4.4311-002	4.2847-002	8.0402-003	1.0237-002	-5.0262-002	-4.0353-002	3.9271-003	1.5339-00
1	15	-6.9204-003	-1.0267-002	3.1574-003	5.9149-002	3.4463-003	5.9500-002	2.0327-002	-4.4008-002	5.9063-002	-2.9567-00
1	16	7.9749-003	-1.4027-002	1.3868-002	-7.6860-002	-2.3390-003	-8.5645-002	2.3346-002	-.5579-002	-2.7252-002	-3.1523-00
1	17	5.2881-003	-2.5708-002	7.8021-002	-8.4204-002	-2.5774-002	-5.2799-002	7.2301-002	-8.0745-002	-3.2945-002	-3.6044-00
1	18	8.5446-003	1.2070-002	-1.1123-001	-6.0702-003	1.7975-003	-4.2496-003	4.0660-002	5.0619-003	5.2393-002	-2.2265-00

COVARIANCE MATRIX

SECTION LABEL ROW

1	19	1,0909-003	-1,8590-002	1,6473-001	-6,1600-002	-1,2199-002	1,2376-002	6,2539-002	-2,6532-002	-1,8754-004	-4,4632-00
1	20	4,5805-003	6,5702-002	4,5098-002	-5,9630-002	-3,3960-003	-8,5891-002	6,9503-002	-6,7714-002	-1,8065-002	-3,7679-00
1	21	1,3307-004	1,9819-002	7,2340-005	-3,1979-002	-9,1580-004	-1,7496-002	3,8215-002	-3,3476-002	-1,3665-002	2,1422-00

GROUP 4 B3=4

VARIABLE MEANS -

VARIABLE MEAN	2,02703	2,16216	2,94595	3,48649	1,13514	4,32432	1,46295	-0,87584	1,92976	-1,85378
VARIABLE MEAN	2,03303	2,74019	2,09138	0,08305	1,12386	-1,61754	0,55314	1,84265	2,04830	1,68151
VARIABLE MEAN	-0,33589									

VARIANCES --

VARIABLE VARIANCE	0,13814	0,63964	0,71922	1,47898	0,12012	1,61411	0,24956	0,25743	0,64864	0,21596
VARIABLE VARIANCE	0,32102	1,09284	0,69495	0,12084	0,09353	0,09372	0,35042	0,46029	0,31452	0,25316
VARIABLE VARIANCE	0,07072									

COVARIANCE MATRIX

SECTION LABEL ROW

1	1	1,3814-001	2,3273-002	1,5015-003	-1,3514-002	5,1802-002	-1,2012-001	-4,1517-004	-8,1434-003	-7,4577-002	1,7522-00
1	2	2,3273-002	6,3964-001	-1,8769-002	-1,3664-001	5,2553-003	-3,0405-001	1,0420-001	7,6223-002	-2,2649-001	7,4520-00
1	3	1,5015-003	-1,8769-002	7,1922-001	-3,3408-001	-1,0360-001	5,1802-001	5,8914-002	9,0648-002	-3,7069-002	4,8373-00
1	4	-1,3514-002	-1,3664-001	-3,3408-001	1,4790+000	4,3544-002	1,7117-001	-1,3342-001	-2,3605-001	1,7495-001	-4,9414-00
1	5	5,1802-002	5,2553-003	-1,0360-001	4,3544-002	1,2012-001	-1,2838-001	5,6464-003	-1,5717-002	5,3393-003	-1,1113-00
1	6	-1,2012-001	-3,0405-001	5,1802-001	1,7117-001	-1,2838-001	1,6141+000	-8,1288-002	-7,6804-002	1,5200-001	-1,2600-00
1	7	-4,1517-004	1,0420-001	5,8914-002	-1,3342-001	5,6464-003	-8,1288-002	2,4956-001	1,0109-001	7,2182-003	-8,0103-00
1	8	-8,1434-003	7,6223-002	9,0648-002	-2,3605-001	-1,5717-002	-7,6804-002	1,0109-001	2,5743-001	2,1272-002	3,7440-00
1	9	-7,4577-002	-2,2649-001	-3,7069-002	1,7495-001	5,3393-003	1,5200-001	7,2182-003	2,1272-002	6,4864-001	-9,7052-00
1	10	1,7522-002	7,4520-002	4,8373-002	-4,9414-002	-1,1113-002	-1,2600-002	-8,0103-002	3,7440-002	-9,7052-002	2,1596-00
1	11	-7,3029-002	2,5329-002	2,9390-002	-1,3807-001	-1,7087-002	2,0566-001	6,9369-002	-2,3275-002	6,7910-002	-1,4019-00
1	12	1,1497-001	-1,4170-002	-5,5128-002	9,6096-004	4,7918-002	-2,1820-001	2,9814-003	-1,3778-001	-2,0423-001	-9,6142-00
1	13	5,1739-002	-2,5306-001	1,5450-001	1,8033-002	1,5197-002	1,5457-001	-4,6237-002	-7,4991-003	1,5972-001	-9,0341-00
1	14	6,3443-002	4,0766-004	-2,1914-003	2,4223-002	6,7703-003	5,9426-002	-7,6793-002	-8,7062-003	-1,0467-001	4,4579-00
1	15	-1,4385-002	-2,8394-002	-2,8758-002	7,7984-002	-1,1537-002	7,2517-002	1,1063-002	-2,1767-002	4,1159-002	-7,3004-00
1	16	-1,0346-002	7,3007-002	3,3866-003	-1,4037-001	-2,6647-002	-7,8098-002	4,7747-002	5,8382-002	-5,0895-002	-1,6049-00
1	17	3,2496-002	1,4533-002	-9,3465-002	1,1193-001	5,0759-002	3,3161-003	1,2648-002	-9,4920-002	7,5286-003	-3,9133-00
1	18	-1,8796-002	1,7864-002	-1,5109-001	1,1398-002	2,7132-002	-1,0977-001	1,8325-001	1,6358-002	2,0886-001	-1,1098-00

COVARIANCE MATRIX

SECTION	LABEL	ROW									
1		19	-4,0897-002	4,9782-003	5,2322-002	7,0879-002	-5,2014-002	1,4587-001	3,8846-002	-2,6614-002	-3,8619-002	-2,2769-00
1		20	4,3708-002	1,6161-001	-6,8048-003	-1,3131-001	3,1262-002	-1,9387-001	8,8971-002	-7,6517-004	-1,2453-001	-6,6086-00
1		21	-2,9197-003	6,7649-002	5,1006-002	-1,3519-001	1,7072-003	-2,7536-002	8,1751-002	2,4126-002	-3,2847-002	-1,9708-00

TABLE OFCOMPARA TIVE MEANS ON THIS RUN

SECTION	LABEL	ROW	B3=1	B3=2	B3=3	B3=4
1		1	2.0756+000	2.1200+000	2.0169+000	2.0270+000
1		2	2.0523+000	1.8400+000	1.9958+000	2.1622+000
1		3	3.0465+000	3.2000+000	3.0000+000	2.9459+000
1		4	3.5814+000	3.8000+000	3.5000+000	3.4865+000
1		5	1.0930+000	1.0933+000	1.0805+000	1.1351+000
1		6	3.7558+000	4.1467+000	3.6525+000	4.3243+000
1		7	1.5911+000	1.6341+000	1.7443+000	1.4629+000
1		8	-7.1273-001	-7.7516-001	-8.7375-001	-8.7584-001
1		9	1.7942+000	1.9189+000	1.8975+000	1.9298+000
1		10	-1.9976+000	-1.8872+000	-1.9741+000	-1.8538+000
1		11	2.0942+000	1.9666+000	2.1843+000	2.0330+000
1		12	2.5919+000	2.8652+000	2.9453+000	2.7402+000
1		13	1.7937+000	2.1052+000	1.9419+000	2.0914+000
1		14	-5.7959-002	-7.8813-002	-5.6076-002	8.3054-002
1		15	1.0118+000	1.0876+000	1.0703+000	1.1239+000
1		16	-1.5624+000	-1.6016+000	-1.5844+000	-1.6175+000
1		17	7.3206-001	6.4843-001	6.4058-001	5.5314-001
1		18	1.9665+000	1.8658+000	2.0175+000	1.8426+000

TABLE OFCOMPARA TIVE MEANS ON THIS RUN

SECTION	LABEL	ROW	B3=1	B3=2	B3=3	B3=4
1		19	2.1752+000	2.1781+000	2.3174+000	2.0483+000
1		20	1.7592+000	1.5797+000	1.8809+000	1.6815+000
1		21	-2.5205-001	-2.6545-001	-2.6257-001	-3.3589-001

POOLED COVARIANCE MATRIX

SECTION LABEL ROW

1	1	1.2566-001	-2.0127-002	1.0948-002	-1.5978-002	2.8944-003	-1.0093-001	-5.8762-003	-1.4861-002	1.1619-002	7.6923-00
1	2	-2.0127-002	5.6324-001	-2.3778-001	3.7762-003	-2.0247-002	5.3613-002	7.0286-003	-2.5390-002	-6.5138-002	2.8676-00
1	3	1.0948-002	-2.3778-001	9.0992-001	-2.3000-001	-5.5957-002	3.7601-002	1.1333-001	4.2015-002	-5.9471-002	6.2383-00
1	4	-1.5978-002	3.7762-003	-2.3000-001	1.3219+000	1.5824-002	5.1120-001	-9.6808-002	-1.3916-001	5.8465-002	7.3762-00
1	5	2.8944-003	-2.0247-002	-5.5957-002	1.5824-002	8.2661-002	-5.6472-002	-1.2160-002	-1.6218-002	1.1298-002	-1.6681-00
1	6	-1.0093-001	5.3613-002	3.7601-002	5.1120-001	-5.6472-002	1.4627+000	-9.5891-002	-7.7796-002	1.7147-001	8.9097-00
1	7	-5.8762-003	7.0286-003	1.1333-001	-9.6808-002	-1.2160-002	-9.5891-002	2.4659-001	-3.4674-003	5.0283-003	-4.2311-00
1	8	-1.4861-002	-2.5390-002	4.2015-002	-1.3916-001	-1.6218-002	-7.7796-002	-3.4674-003	2.9149-001	-2.8346-002	1.5122-00
1	9	1.1619-002	-6.5138-002	-5.9471-002	5.8465-002	1.1298-002	1.7147-001	5.0283-003	-2.8346-002	5.6568-001	-5.9331-00
1	10	7.6923-003	2.8676-002	6.2383-002	7.3762-002	-1.6681-002	8.9097-002	-4.2311-002	1.5122-002	-5.9331-002	2.3085-00
1	11	2.2683-003	2.0752-002	-3.4988-002	-2.3183-001	-6.0228-003	-9.4229-002	3.9930-002	9.2468-002	3.2424-002	-7.3325-00
1	12	1.3243-003	8.0387-002	-8.8187-002	-3.1413-002	-2.0344-002	-6.5822-002	1.8203-002	-9.0746-002	-3.1688-002	-7.2384-00
1	13	2.5302-003	-5.8499-002	1.0772-001	-7.3193-002	4.7000-003	8.4923-002	3.2267-002	-2.1497-002	9.2840-002	-3.9541-00
1	14	7.0214-003	3.9505-003	-3.2508-002	4.2453-002	7.9404-003	3.8273-002	-4.8047-002	-3.1478-002	-1.2578-002	1.2020-00
1	15	-4.9735-003	4.8030-003	-1.3474-002	4.6965-002	2.0852-003	5.0214-002	1.3239-002	-4.8975-002	5.2350-002	-2.8574-00
1	16	3.2691-003	1.7749-003	2.2654-002	-1.0775-001	-2.5622-003	-8.3321-002	3.6866-002	9.1936-002	-3.3469-002	-2.7457-00
1	17	1.9604-002	-3.4742-002	8.5103-002	-6.3280-002	-1.0354-002	-1.2539-001	5.6780-002	-9.2505-002	-2.2167-002	-3.7613-00
1	18	-1.1335-002	8.1549-002	-1.5594-001	1.6730-002	7.2795-003	-2.3318-002	5.2488-002	-9.8480-003	8.8439-002	-4.2481-00

POOLED COVARIANCE MATRIX

SECTION LABEL ROW

1	19	-1.0136-002	-5.1220-004	1.0708-001	-1.3387-002	-1.3517-003	-2.7058-003	5.5003-002	-3.6870-002	-3.1477-002	-3.5462-00
1	20	1.7785-003	8.9888-002	1.1457-002	-7.0248-002	-2.5136-003	-1.1340-001	7.4740-002	-7.6598-002	-2.7729-002	-6.1785-00
1	21	-1.3150-003	1.6147-002	6.6267-003	-3.4273-002	-4.4012-003	-1.6034-002	4.1846-002	3.1636-002	-1.8998-002	1.4814-00

COVARIANCE MATRICES WERE POOLED

TABLE OF COMPARATIVE WEIGHTS ON THIS RUN

SECTION	LABEL	ROW	B3=1	B3=2	B3=3	B3=4
1		1	2,2536+001	2,3032+001	2,1836+001	2,2267+001
1		2	7,6483+000	7,4231+000	7,3680+000	7,8386+000
1		3	7,9779+000	8,0065+000	7,7803+000	7,8598+000
1		4	3,9121+000	3,9723+000	3,8578+000	3,5396+000
1		5	2,2512+001	2,2667+001	2,2061+001	2,3151+001
1		6	4,3692+000	4,5586+000	4,1909+000	4,7094+000
1		7	5,2605+000	5,0742+000	5,3022+000	4,5853+000
1		8	6,6231+000	6,4931+000	5,9729+000	6,1862+000
1		9	-3,4439-002	-4,2652-002	1,2361-001	4,8946-002
1		10	-9,7268+000	-9,8298+000	-9,6420+000	-9,5042+000
1		11	5,3987+000	5,1900+000	5,5944+000	5,3182+000
1		12	2,5223+000	2,8968+000	2,7561+000	2,7367+000
1		13	4,7744-001	9,3096-001	7,0784-001	8,8681-001
1		14	8,9595-001	3,1478-001	9,2852-001	1,2630+000
1		15	3,7075+000	4,4899+000	3,9257+000	4,5635+000
1		16	-1,4921+001	-1,4950+001	-1,5099+001	-1,4824+001
1		17	2,3630+000	2,2412+000	1,9499+000	2,0765+000
1		18	2,3250+000	2,1541+000	2,2732+000	2,0782+000

SECTION LABEL ROW B3=1 B3=2 B3=3 B3=4

TABLE OF COMPARATIVE WEIGHTS ON THIS RUN

:TION LABEL ROW

		B3=1	B3=2	B3=3	B3=4
1	19	7.1014-001	5.6554-001	8.2587-001	4.4346-001
1	20	3.4232+000	2.9490+000	3.7679+000	3.4059+000
1	21	-6.7065-001	-1.1279-001	-4.1085-001	-9.0587-001

CONSTANTS FOR ALL GROUPS

GROUP	B3=1	B3=2	B3=3	B3=4
CONSTANT	111.93387	114.56059	111.35754	112.26080

RESULTS OF DISPERSION TEST -----ORIGINAL BY ASSIGNED

CTION LABEL ROW

		B3=1	B3=2	B3=3	B3=4
B3=1	1	64	38	40	30
B3=2	2	10	34	17	14
B3=3	3	52	38	102	44
B3=4	4	6	8	6	17