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USES OF TELEVISION VIEWING AND CONSUMER LIFE STYLES:
A MULTIVARIATE ANALYSIS

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ABSTRACT

Little empirical evidence exists on the uses people make of television viewing although these uses appear to mediate possible effects of the mass media. This study sought to determine the topology of television uses by adults and to relate these uses to the more familiar descriptors of demographics and television programs and to some recently developed life style classifications.

The study employed a two hundred fifty item questionnaire with sections on uses of television, demographics, program titles, and life styles. The forty-two use variables were based on the work of Bradley S. Greenberg with British children; the eighty-five life style variables were derived from a questionnaire made available by Douglas J. Tigert.

In February of 1977, a stratified, random sample of adults in Fremont, Ohio, was surveyed door-to-door. The 1,795 completed questionnaires were factor analyzed on the use variables, producing twelve interpretable factors. The variables defining the factors were crosstabulated with age and sex. Multiple discriminant analyses of the use factors were made on the basis of demographics and television program titles. The life style items were factor analyzed producing fourteen interpretable factors, and the use and life style factors were related by means of canonical correlation analysis.

The findings in this study are supported by eighteen separate factor analyses of the use variables and eleven analyses of the life styles. It was found that the uses discriminate between age, sex, income, education, consumption, and children, and between viewers and non-viewers of specific programs. Certain life styles associated with particular uses to the exclusion of others. These results demonstrate that eleven uses of television (AROUSAL, PLEASURE, INFORMATION, COMPANY, NOT USING TELEVISION, SOCIAL SUBSTITUTE, DISTRACTION, MODELING, PASS TIME, BACKGROUND NOISE, ESCAPE, and BOREDOM) reliably segment the television audience into groups with heuristic value for programming and advertising researchers.

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CHAPTER I

INTRODUCTION

Statement of the Problem

This study focuses on two distinct research problems: the first concerns the uses made of television by individual viewers in the home. Although classic speculation on the functions of television has included socialization, surveillance, correlation and, of course, entertainment and the ubiquitous escapism function, recent investigators have become aware of other uses such as companionship, background noise in the house and emotional arousal. Other scholars have suggested a para-social function for television viewing and others point out a social withdrawal function. As little empirical data on uses has been collected, the primary purpose of this study was to survey a large number of adults to see what uses they are currently making of television. Some previous studies have been limited in generalizability by the use of small samples or specialized audiences or by the use of specialized audiences or by the use of special purpose questionnaires. Other studies have been limited by the type of statistical methodology utilized. In this study, factor analysis of responses to forty-two Likert-type scales by nearly two thousand adults clearly demonstrates the patterns of uses of television viewing by adults. Because of the large sample, this analysis is more broadly generalizable than

previous empirical research in the area of television uses.

The patterns, or use factors, established by factor analysis were analyzed using multiple discriminant analysis to show the relationships between demographic variables and the factors. The purpose of this portion of the research was to make clear that use factors do not provide information that is redundant with demographics. The use factors were then analyzed in relation to selected television program titles to demonstrate a practical application of use structures. Description of the audience of a program in terms of the uses they make of television may refine production concepts and provide an improvement in methods of program evaluation.

The second research problem of this study concerns consumer life styles. A paucity of meaningful data on television audiences has been an on-going dilemma for mass media researchers, but it is now apparent that demographic data can be expanded by the addition of psychographic indicators to produce descriptive profiles of television viewers. Although widely utilized by advertising researchers such as the Leo Burnett Advertising Agency, most life style investigations have been proprietary and are not available as a part of the data base of broadcasting research. One purpose of this study was to elicit a spectrum of consumer life styles which have been labelled with such names as the "Cash Buyer" and his alter ego, the "Credit Buyer," the "Opinion Leader," and the

"Parent" along with various types of shoppers. This was done by means of factor analysis of the survey data. These life style factors were related to use factors by means of canonical correlation to provide additional descriptors of the television audience. This research approach improves on previous studies by showing which consumer life styles characterize particular uses.

A secondary purpose of this study was to demonstrate that factor structures resulting from survey data may have more variability than is suggested by statistical literature, but that replication in multiple rotations can determine what is appropriate for interpretation. This is a methodological goal that grew out of the need to establish a firm basis for reliance on the factor analysis of uses of television for subsequent analyses. The methodology of the actual survey is discussed in Chapter III along with the methodology of the factor analyses. Chapter IV includes all the findings of the study: frequency distribution of responses, factor analyses of uses, crosstabulations of variables for factors, discriminant analyses, factor analyses of life styles, and canonical correlation between uses and life styles. The findings are summarized and evaluated in the fifth and final chapter.

Theoretical Perspective

This study accepts the major assumptions of the uses and gratifications perspective in mass communication research, and utilizes the responses of the active audience to describe the

constructs of television viewing functions and personality profiles.¹ The uses and gratifications approach asserts that the use of something generally occurs as a result of a need (or group of needs) being satisfied. In this framework, a "use" serves a "function" in one's life. For instance, the viewing of television news programs serves the obvious function of providing current information, and may also, depending on the program, fill a need for arousal/stimulation on the part of those viewers who enjoy tales of burglaries and robberies. Functionalism is a descriptive model which assumes: 1) That the audience is active; its consumption patterns are not entirely casual, it exhibits purposeful behavior, and its members have individual expectations. 2) That people use television (and other media) and allow its effects; television is not seen as affecting its audience in a strictly manipulative way; rather, the audience members individually permit themselves to be affected in some ways and resist other effects. 3) That each of the media compete with other sources of need gratification; these sources include interpersonal relationships, group memberships, solitary activities and the other media. 4) That the audience is capable of supplying the pre-requisite information for research into its needs and

¹Elihu Katz, Jay G. Blumler and Michael Gurevitch, "Utilization of Mass Communication by the Individual," in The Uses of Mass Communication, eds. Jay G. Blumler and Elihu Katz (Beverly Hills, California: Sage Publications, Inc., 1974), pp. 19-31. This article contains a clear treatment of the history and current thought on the subject of the functions of mass communications in general.

media uses; in particular, this model assumes that field surveys and interviews are valid methods of data collection.

5) That value judgments about media content are not appropriate or heuristic in the initial stages of uses and gratifications research.

The functionalist model is the basis for the major studies on the uses of television viewing by Bower,² Greenberg,³ and Foley,⁴ and on consumer life styles by Wells,⁵ and Tigert⁶ on which this proposed study builds. It is the model advocated by mass communications theorists and researchers from Merton⁷ to Wright⁸ to Mendelsohn⁹. A complete discussion of the functional model in relation to the classic functions

²Robert T. Bower, Television and the Public (New York: Holt, Rinehart and Winston, 1973).

³Bradley S. Greenberg, "Gratifications of Television Viewing and Their Correlates for British Children," in The Use of Mass Communications, eds. Jay G. Blumler and Elihu Katz (Beverly Hills: Sage Publications, 1974).

⁴Joseph M. Foley, "A Functional Analysis of Television Viewing" (Doctoral dissertation, University of Iowa, 1968).

⁵William D. Wells, "Psychographics: A Critical Review," Journal of Marketing Research 12 (May 1975): 196-213.

⁶Douglas J. Tigert, "Life Style Analysis as a Basis for Media Selection," in Life Style and Psychographics, ed. William D. Wells (New York: American Marketing Association, 1974).

⁷Robert K. Merton, Social Theory and Social Structure (Glencoe: Free Press, 1957).

⁸Charles R. Wright, "Functional Analysis and Mass Communication," Public Opinion Quarterly 14 (Winter 1960).

⁹Harold Mendelsohn, "Some Policy Implication of the Uses and Gratifications Paradigm," in The Uses of Mass Communications, eds. Jay G. Blumler and Elihu Katz (Beverly Hills: Sage Publications, 1974).

and dysfunctions of mass media is found in Charles R. Wright's Mass Communication: A Sociological Perspective.¹⁰

Significance

The importance of this study lies in the clarity of its description of the domain of television. Previous studies have utilized structures that were too simplistic and were over generalized to many media. Rosengren and Windahl have constructed several typologies of functions of mass media in relation to need gratification based on previous research.¹¹ Their findings could be assisted by more precise empirical evidence of the proportion and kind of functions each of the mass media serve. This study provides information on the functions of television viewing, as other studies may for radio and record listening or newspaper and magazine reading. The Rosengren and Windahl investigations are primarily concerned with the substitution of mass media for interpersonal contacts. Other researchers are more concerned with the effects of the mass media. The current controversy over violence on television largely reflects this "effects" approach. Many studies showing effects from the viewing of violence have not replicated reliably. The distinguishing of a group of

¹⁰Charles R. Wright, Mass Communication: A Sociological Perspective, 2nd ed. (New York: Random House, 1975), pp. 9-22.

¹¹Karl Erik Rosengren and Swen Windahl, "Mass Media Consumption as a Functional Alternative," Sociology of Mass Communications, ed. Denis McQuail (Baltimore: Penguin Books, Inc., 1972), pp. 166-194.

viewers who use the medium for emotional arousal may clarify research into the effects of violence. By separating the research subjects according to the uses they make of television, it may become possible to locate effects from content both on the short- and long-term bases. This study takes one more step in providing empirical evidence for the existence of a pattern of uses of television viewing.

CHAPTER II

RELATED RESEARCH

Uses of Television Viewing Studies

Although there is considerable literature dealing with the functions of mass communications in general, little of it isolates television from the remainder of the mass media. The focus of most of the investigations into why people use media has been on inter-media comparisons; few people have examined what the audience says are their reasons for watching television. Several empirical studies explore the functions of the medium during periods of unusual social events (a newspaper strike;¹² the Israeli War¹³), and other studies such as those by Bogart¹⁴ and Smith,¹⁵ compare functions served by more than one medium. However, most of the primary published works on the subject of the uses of television viewing are either out of date, possess a limited range of possibilities

¹²Bernard Berelson, "What 'Missing the Newspaper' Means," in Communication Research, ed. Paul F. Lazarsfeld and Frank N. Stanton (New York: Harper Bros., 1949), pp. 111-129.

¹³Tsiyona Peled and Elihu Katz, "Media Functions in War-time: The Israel Home Front in October, 1973," in The Uses of Mass Communications, ed. Jay G. Blumler and Elihu Katz (Beverly Hills, California: Sage Publications, 1974).

¹⁴Leo Bogart, "The Mass Media and the Blue-Collar Worker," in Blue-Collar World: Studies of the American Worker, ed. Arthur B. Shostak and William Gomberg (New Jersey: Prentice-Hall, 1964), pp. 416-427.

¹⁵David M. Smith, "Some Uses of Mass Media by 14 Year Olds," Journal of Broadcasting (Winter 1971-72): 37-50.

or focus on some single segment of the population. Others concentrate on a single dominant function or are marred by methodological problems.

In the Steiner and Bower studies of audience attitudes in 1963 and 1973, the researchers were primarily concerned with a distinction between reports of "productive" and "unproductive" reasons for viewing television. According to Steiner,¹⁶ people say they watch for general enjoyment, to see particular programs, and to learn something, but say that other people watch out of a desire for background noise, out of a fear of missing something, for escape from other activities, and for reasons of pure sociability. In the Bower study a decade later (1973),¹⁷ replicating Steiner, the distribution of reasons remained virtually the same. These studies utilized large samples and multivariate analysis techniques. Their conclusions, consequently, provide strong empirical support for the findings in Greenberg's study of British children¹⁸ and, subsequently, in the pilot study of adult uses of television.¹⁹

¹⁶Gary A. Steiner, The People Look at Television (New York: Knopf, 1963).

¹⁷Robert T. Bower, Television and the Public (New York: Holt, Rinehart and Winston, 1973).

¹⁸Bradley S. Greenberg, "Gratifications of Television Viewing and Their Correlates for British Children," in The Uses of Mass Communications, ed. Jay G. Blumler and Elihu Katz (Beverly Hills: Sage, 1974), pp. 71-92.

¹⁹Susan T. Eastman, "Adult Uses of Television: A Replication of Greenberg's Survey" (manuscript, Bowling Green State University, 1975).

Wenner recently interpreted the viewing of older adults by means of Q-analysis, and concluded that the information function of television dominates for that group.²⁰ Davis, Edwards, Bartel and Martin also examined the viewing of older adults by measuring actual set utilization and tuning, with the same general results.²¹ Smith studied the media preferences of fourteen year olds in Scotland, including radio and comics as well as television; he found the chief use of television to be as a "coin of exchange" among teenagers, meaning that it serves as a source of conversation material.²²

The principal study in this area is that of Greenberg, done in England in 1972, among classroom children ages 9, 12 and 15.²³ An initial content analysis of children's essays generated eight clusters of statements that appeared as Likert-type scales in his primary study of 726 children. These coalesced into eight constructs in the main study after factor analysis. The resulting constructs were: Habit, Pass Time, I (a negative attitude of having nothing better to do),

²⁰Lawrence Wenner, "Functional Analysis of TV Viewing for Older Adults," Journal of Broadcasting 20:1 (Winter 1976): 77-88.

²¹Richard H. Davis, Allan E. Edwards, Dennis J. Bartel, and Dorian Martin, "Assessing Television Viewing Behavior of Older Adults," Journal of Broadcasting 20:1 (Winter 1976): 69-76.

²²David M. Smith, "Some Uses of Mass Media by 14 Year Olds," Journal of Broadcasting 16:1 (Winter 1971-72): 37-50.

²³Greenberg, p. 73.

Pass Time II (a more positive attitude that viewing gives one something to do), Learning, Relax, Forget (a state of removal from daily cares), Arousal (referring to television content as a source of stimulation and excitement), and Companionship. Greenberg originally hypothesized two different sorts of learning factors: Learning About the World (generally news and information) and Learning About the Self (learning values and behaviors). However, in his study, these combined into a single learning construct. Pass Time separated into two distinct factors bringing the total of factors to eight. Although the order of factors and percent of variance accounted for differed for different age groups, the eight reasons for television viewing substantially replicated in several analyses. Greenberg concluded that children's reasons for viewing television might be similar to the reasons adults watch television. The hypothesis that these factors are indicative of adult patterns was substantiated in the pilot study of adult uses of television.²⁴

Other sources for hypotheses concerning the uses of television occur in the literature. For example, Pearlin, among others, argues the escape function of television.²⁵ Horton and Wohl suggest that television takes the place of face-to-

²⁴Eastman, p. 12.

²⁵Leonard J. Pearlin, "Social and Personal Stress and Escape TV Viewing," Public Opinion Quarterly 23 (Summer 1959): 255-259. Also, Elihu Katz and David Foulkes, "On the Use of the Mass Media as 'Escape': Clarification of a Concept," Public Opinion Quarterly (1962).

face interaction for some viewers,²⁶ and this hypothesis is supported by the work of Hess,²⁷ and the writings of Nordenstreng, among others.²⁸ Stephenson is known for his play or "leudenic" theory which emphasizes entertainment as the primary function of television viewing.²⁹ Lichty goes beyond the traditional four functions of information, correlation, surveillance, and entertainment, to identify eight functions for television in a study of viewers of "The Real McCoy's: relaxer, subject for social intercourse, time filler, teacher of values, behavior guide, companion, stimulus for nostalgia and babysitter."³⁰ Foley's study of the uses of television viewing utilized the main ideas of several sources in a Q-analysis of two heterogeneous adult populations.³¹ He hypothesized the following eight functions of television viewing: 1) Withdrawal

²⁶Donald Horton and R. Richard Wohl, "Mass Communication and Para-Social Interaction," Psychiatry 19 (August 1956): 215-229.

²⁷Beth B. Hess, "Stereotypes of the Aged," Journal of Communication 24 (Autumn 1974): 79.

²⁸Kaarle Nordenstreng, "Comments on 'Gratification Research' in Broadcasting," Public Opinion Quarterly 34 (Spring 1970): 130-132.

²⁹William Stephenson, The Play Theory of Mass Communications (Chicago: The University of Chicago Press, 1967).

³⁰Lawrence W. Lichty, "'The Real McCoy's' and It's (sic) Audience: A Functional Analysis," Journal of Broadcasting 9 (Spring 1965): 157-166.

³¹Joseph M. Foley, "A Functional Analysis of Television Viewing" (Ph.D. dissertation, University of Iowa, 1968). Foley refers to his study as a factor analysis although it utilizes Q-methodology.

(based on Pearlin's escape function and forgetting problems); 2) Play (based on Stephenson's theory); 3) Conversation (after Lichty); 4) Togetherness (social interaction); 5) Para-social Interaction (from Horton and Wohl); 6) Educational (based on Lasswell, Wright, and Schramm); 7) Background (as noise for companionship); and 8) Normative (teaching social values after Lichty). Although his rationale and background research show evidence of thoroughness and comprehensiveness, Foley's study is flawed by sample sizes of 20 and 27.³²

Life Style Research

Standardized demographics are the major tool of media research, but they are thought to provide inadequate information by many researchers.³³ An outcome of the diffusion research of the 1940's was a gradual increase in the search for objective measures to provide supplemental data about groups of consumers. Qualitative information was thought desirable

³²For a discussion of the generalizability of the findings of Q-analysis, see William Stephenson, The Study of Behavior: Q-Technique and Its Methodology (Chicago: University of Chicago Press, 1953), p. 1. For a discussion of requisite sample size for factor analysis, see: J. P. Guilford, "When Not to Factor Analyze," Psychological Bulletin 49 (1952): 26-37; Raymond K. Tucker and L. J. Chase, "Factor Analysis in Human Communication Research" (manuscript, Bowling Green State University, 1975), p. 53; David J. Weiss, "Factor Analysis in Counseling Research," Journal of Counseling Research 17 (1970): 479; and Andrew J. Comrey, A First Course in Factor Analysis (New York: Academic Press, 1973), p. 200.

³³Joseph T. Plummer, "Life Style Patterns: A New Constraint for Mass Communications Research," Journal of Broadcasting 16 (Winter, 1971-72): 79-89.

along with the quantitative data from demographics if the problems of the immense amounts of time consumed by personal interviews and the subjectivity of clinical research could be overcome. Stimulated by the motivation research of the 1950's more investigators inquired into why people purchased the brands they did.³⁴ A large amount of the initial psychological research on consumers employed standardized personality inventories such as the Edwards Personality Preference Schedule (EPPS), which is assumed to have a high degree of reliability and validity. EPPS purports to measure fifteen psychological needs, but Koponen (1960),³⁵ among others, found little correlation between the needs of the sexes and the specifics of consumer behavior. Advertisers want to know who buys which brand when influenced by what advertising. According to Plummer, personality research, using standardized inventories, appears to provide information that is too general for predicting specific consumer behavior.³⁶

Self concept and social class measures have also been applied to consumers. However, as with standardized personality inventories, problems of interpretation and prediction arise when the populations tested are not homogeneous with respect

³⁴William D. Wells and Douglas J. Tigert, "Activities, Interests and Opinions," Journal of Advertising Research 11 (August 1971): 27-35.

³⁵Arthur Koponen, "Personality Characteristics of Purchases," Journal of Advertising Research 1 (September 1960): 6-12.

³⁶Plummer, p. 79.

to the consumer behavior in question.³⁷

Hustad and Pessemier note that there has been a clear and growing disenchantment with the ability of self-concept and social class variables to accurately predict behavior.³⁸ They fail to explain why two households with identical demographic characteristics differ markedly in their marketplace behavior. In an effort to differentiate between seemingly identical households, life style and psychographic research questionnaires have been developed. They have become salient due to the acceptance of the concept of market segmentation in industry,³⁹ along with the availability of large computers and multivariate statistical techniques.⁴⁰

"Psychographics" and "life style" have been variously defined. Wells distinguishes between "psychographic" surveys which place a heavy emphasis on generalized personality traits, and "life style" surveys which have tended to focus either on broad cultural trends or on needs and values thought

³⁷Emanuel Demby, "Psychographics and From Whence It Came," in Life Styles and Psychographics, ed. William D. Wells (New York: American Marketing Association, 1974).

³⁸Thomas P. Hustad and Edgar A. Pessemier, "The Development and Application of Psychographic Life Style and Associated Activity and Attitude Measures," in Life Style and Psychographics, ed. William D. Wells (New York: American Marketing Association, 1974).

³⁹Ronald E. Frank, William F. Massey and Thomas M. Lodahl, "Purchase Behavior and Personal Attributes," Journal of Advertising Research 9 (December 1969): 15-24.

⁴⁰William Lazar, "Forward" to Life Style and Psychographics, ed. William D. Wells (New York: American Marketing Association, 1974).

to be closely associated with consumer behavior.⁴¹ Both endeavor to create a more humanized picture of the consumer.

Wind and Green distinguish between two types of life style research defining each by the type of behavior one wishes to predict.⁴² The situation- or product-specific approach focuses on the prediction of product or media related behavior. Product-specific research frequently is directed toward hypothesized product attributes and rarely allows for unexpected results. It also has the disadvantage of each product requiring a separate study and a unique scale.

The general approach is more concerned with a broad understanding of consumer or even non-consumer aspects of behavior. Wells has frequently indicated the need to build a data base of psychographics or life style information that can be drawn on for a variety of products and in a variety of changing situations.⁴³ However, the majority of publications on life style research are generally advertising discussions, not reports of empirical studies. Wilson introduced life style concepts such as "The Happy Homemaker," "The Special Shopper," and "The Fashion Conscious," in a 1966 study relating homemaker living patterns, product consumption, and

⁴¹William D. Wells, ed., Life Styles and Psychographics (New York: American Marketing Association, 1974), p. 319.

⁴²Yoram Wind and Paul E. Green, "Some Conceptual, Measurement and Analytical Problems in Life Style Research," in Life Style and Psychographics, ed. William D. Wells (New York: American Marketing Association, 1974).

⁴³Wells, pp. 332-334.

magazine readership.⁴⁴ Wells and Tigert describe users of eye make-up and shortening in one of the few product-specific reports available in the literature;⁴⁵ Tigert delineates the Playboy reader in another.⁴⁶ These studies utilized analysis of lengthy questionnaires incorporating demographics, general media consumption, interests in politics and arts, and consumer and personality characteristics, to obtain distinct descriptive profiles. Very few obtainable studies deal with the general television viewer, although both Wells and Tigert claim such research is both possible and might be profitable. In order to test the hypothesis that certain consumer characteristics alone would produce discernable life style profiles of television viewers, a pilot study was conducted by Eastman and Tucker in 1976.⁴⁷ The results satisfactorily demonstrated the likelihood of interpretable consumer life styles appearing in a heterogeneous survey of the population.

⁴⁴Clark L. Wilson, "Homemaker Living Patterns and Marketplace Behavior: A Psychometric Approach," in New Ideas for Successful Marketing, Proceedings of the American Marketing Association, ed. John S. Wright and Jac L. Goldstucker (Spring, 1966), pp. 305-331.

⁴⁵William D. Wells and Douglas J. Tigert, "Activities, Interests and Opinions," Journal of Advertising Research 11 (August 1971): 27-35.

⁴⁶Douglas J. Tigert, "Life Style Analysis as a Basis for Media Selection," in Life Style and Psychographics, ed. William D. Wells (New York: American Marketing Association, 1974).

⁴⁷Susan T. Eastman and David E. Tucker, "Bowling Green Life Styles: A Factor Analysis" (manuscript, Bowling Green State University, 1976).

Pilot Studies

"Adult Uses of Television: A Replication of Greenberg's Survey"

A total of 105 adults in two convenience communities was surveyed on the uses they made of television in 1975.⁴⁸ A self-administered form of Greenberg's thirty-item questionnaire⁴⁹ was utilized with demographic items added. When factor analyzed, both overall and in subgroups, this sample of adults showed a factor structure closely resembling Greenberg's. In the overall analysis, five factors emerged with an eigenvalue cutoff greater than .98, each of which accounted for better than six percent of the total variance. The five constructs, in total accounting for 92% of the total variance, were what Greenberg labelled: Learn, Company, Relax, Pass Time I and II, and Forget.⁵⁰ These factors were generally replicated in subgroups differentiated on the basis of age, sex, and work or stay-at-home. The purpose of this pilot study was to demonstrate the applicability of Greenberg's questionnaire to adult viewers of television. The results of the overall analysis appear in Tables 1-5, and support this assumption.

⁴⁸Susan T. Eastman, "Adult Uses of Television: A Replication of Greenberg's Survey," (manuscript, Bowling Green State University, 1975).

⁴⁹Greenberg, "Gratifications of Television Viewing and Their Correlates for British Children," p. 91.

⁵⁰This principal factors analysis utilized varimax rotation of seven factors, and a minimum of three salient items to define a factor, each loading above .30. In the overall analysis, every factor actually had two or more items loading above .55.

Table 1
Pilot Uses Study
Factor I: LEARN

Variables	Percent of Total Variance Accounted For: 54%	Loadings*
I WATCH TV BECAUSE:		
21. I can learn what can happen to me		.78
26. It teaches me things		.75
18. It gives me ideas		.66
29. It shows how other people deal with the same problems I have		.65
5. It helps me learn things about myself		.63
10. I can learn how to do things I haven't done before		.62

*Rounded Off to Two Decimal Places

Table 2
Pilot Uses Study
Factor II: COMPANY

Variables	Percent of Total Variance Accounted For: 15%	Loadings
I WATCH TV BECAUSE		
17. It keeps me company when there's no one to talk to		.80
25. It makes me feel less lonely		.80
9. I won't be alone		.73
20. It passes the time away		.54
1. It's almost like a human friend		.43

Table 3
Pilot Uses Study
Factor III: RELAX

Variables	Percent of Total Variance Accounted For: 10%	Loadings
I WATCH TV BECAUSE		
27. I just enjoy watching		.81
11. I just like to watch		.74
16. It's a pleasant rest		.56
19. It's so much fun		.39

Table 4
Pilot Uses Study
Factor IV: PASS TIME I & II

Variables	Percent of Total Variance Accounted For: 7%	Loadings
I WATCH TV BECAUSE		
24. I don't have to do anything when I watch		.57
12. I have nothing better to do		.56
28. It gives me something to do		.53

Table 5
Pilot Uses Study
Factor V: FORGET

Variables	Percent of Total Variance Accounted For: 6%	Loadings
I WATCH TV BECAUSE:		
7. I can forget about my work		.71
15. It helps me forget my problems		.57
8. It calms me down when I'm in a temper		.49

Separate factor analyses for subgroups seemed to produce distinguishable factor structures, but the samples were too small to allow for dependable interpretation of the results.

"Bowling Green Life Styles: A Factor Analysis"

The purpose of this study was to provide consumer profiles of adult television viewers using the tool of a self-administered life style questionnaire. Since it would be impractical to attempt to describe all elements of a heterogeneous population in any single study, only certain characteristics related to consumer behavior were sought. An early form of Tigert's 300 item activity, interest and opinion questionnaire⁵¹ was obtained and reduced to 130 items; demographic information was also requested. A sample of 156 adults were surveyed in 1976 by Eastman and Tucker.⁵² The questionnaires were factor analyzed using orthogonal and oblique rotations to compare factor structures.⁵³ The primary orthogonal analysis satisfactorily differentiated thirteen factors accounting for forty-five percent of the total variance which replicated under various conditions of rotation. The factors were named:

⁵¹Douglas J. Tigert provided an early version of his questionnaire in response to a telephone call in March, 1976.

⁵²Eastman and Tucker, 1976.

⁵³In the primary orthogonal rotation, fifteen factors were rotated. To be considered for interpretation, a factor had to account for at least two percent of the variance, and had to contain at least three salient variables. To be considered substantial, a variable had to correlate .30 or better with a factor in a non-complex loading. An eigenvalue cutoff of 1.0 was employed. Sphericity was tested using Bartlett's Test, and the null hypothesis was rejected.

Table 6
Results of Four Factor Analyses of Life Style Data

Factors	Rotations				
	Orthogonal 130 Items	Oblique 130 Items	Rao's * Canonical 95 Items	Oblique 95 Items	Anticipated Factors
Opinion Leader	I	I	II	I	X
Role Traditionalist	II	II	VII	II	X
Light Housekeeper	III	XII	V	VI	X
Artistic Consumer	IV	XIV	VI		X
Mobile Consumer	V				
Anti-Shopper 1	VI	VI		VIII	X
Anti-Shopper 2	VII				
Brand Name Shopper	VIII	VIII	IX		X
Sports Extrovert	IX	IX	X		X
Cash Buyer	X			V	
Credit Buyer		V	III	III	X
Quality Shopper	XI	XI	XI		X
Politically Conscious	XII				
Advertising Conscious	XIII			IV	X
Anti-Advertising Conscious		IV	IV		

*Chester W. Harris, "Canonical Factor Models for the Description of Change," in Handbook of Multivariate Experimental Psychology, ed. Raymond B. Cattell (Chicago: Rand McNally & Company, 1966), pp. 404-407. In this method of factor analysis, different limitations are placed on the communalities than in traditional factor methods such as Pearson's.

Opinion Leader, Role Traditionalist, Light Housekeeper, Artistic Consumer, Mobile Consumer, Anti-Shoppers I and II, Brand Name Shopper, Sports Extrovert, Cash and Credit Buyers, Quality Shopper, Politically Conscious, and Advertising and Anti-Advertising Conscious. It appeared that some constructs (Anti-Shoppers I and II) might be the result of age differentiation, but the sample in this pilot was too small to test this possibility. The variables composing the factors appear in Appendix B. Table 6 shows all the constructs (factors) and in which analysis they appeared. Retention of the factor structure through additional rotations attests to the validity of this questionnaire. The right-hand column marks indicate which constructs were anticipated in the dissertation survey.

Research Hypotheses

The research hypotheses for this study were grouped into hypotheses about the uses of television viewing, those about consumer life styles, and those about the interrelations of uses and life styles. Hypotheses relating to uses came primarily from the literature and secondarily from the pilot study replicating Greenberg (see Table 7).⁵⁴ Those relating to life styles came primarily from the Eastman-Tucker pilot study and the salient elements of the original Tigert questionnaire.⁵⁵ The interrelationships were assumed from apparent face validity and the previous research. The hypotheses were:

⁵⁴Eastman, 1975.

⁵⁵Tigert, sample questionnaire.

Table 7
Hypothesized Uses of Television

Hypothesized Constructs (factors)	Factors Appearing in Greenberg's Results	Sources of Rationale for Concepts
Learn I (about self)	X*	Lichty (teacher of values; behavior guide) Foley (normative)
Learn II (about world)		Wenner (information) Davis, <u>et al.</u> ; Foley
Companionship I (noise)	X	Lichty (companion; babysitter) Foley (background)
Companionship II (Para- social exchange)		Horton & Wohl (para- social interaction) Hess; Nordenstreng; Foley
Pass Time I (negative: nothing better to do)	X	
Pass Time II (positive: something to do)	X	Lichty (time filler)
Habit	X	
Relax	X	Lichty (relaxer) Stephenson (play) Foley
Forget	X	Pearlin (escape) Foley (withdrawal)
Arousal	X	
Conversation (subject for talk)		Lichty (subject for social intercourse; nostalgia) Smith (coin of exchange) Foley

* Only a single "Learn" factor appeared in Greenberg's study, combining both aspects of "learn about self" and "learn about world."

- I: The eight clusters of reasons (factors) for viewing television found in Greenberg's study of British school children would replicate as adult uses of television.⁵⁶
- II. A ninth factor (Learning II or Information) would appear indicating support for Greenberg's original hypothesis that learning about the world (Learning I) is separate from learning about one's self (Learning II). Support for this view comes from Wenner,⁵⁷ Davis, et al.,⁵⁸ and Foley.⁵⁹
- III. A tenth factor demonstrating the use of television as a medium of social exchange (as a conversational subject) would appear. Support for this postulate comes from Smith,⁶⁰ Lichty⁶¹ and Foley.⁶²
- IV. An eleventh factor will appear containing elements indicating use of television as a substitute for social interaction (companionship II; para-social exchange). Horton and Wohl,⁶³ Hess,⁶⁴ Nordenstreng,⁶⁵ and Foley⁶⁶ support this assumption.
- V. Approximately twelve consumer life style factors would emerge. These life styles would have heuristic value as descriptors of the television audience.

⁵⁶Greenberg, 1974.

⁵⁷Wenner, 1976.

⁵⁸Davis, et al., 1976.

⁵⁹Foley, 1968.

⁶⁰Smith, 1971.

⁶¹Lichty, 1965.

⁶²Foley, 1968.

⁶³Horton and Wohl, 1956.

⁶⁴Hess, 1974.

⁶⁵Nordenstreng, 1970.

⁶⁶Foley, 1968.

The unique assumption of this study was that particular consumer life styles would associate with particular uses of television. Demographic indicators such as age and sex were also utilized to distinguish people who use television in one way from those who made other uses of the medium. In addition, it was assumed that viewers of particular programs would associate with particular uses of television. The anticipated result of these several steps of analysis was a clear picture of the adult television audience in terms of the uses they make of television viewing, the relationship of age, sex and other demographic indicators to those use factors, the relationship of selected programs to the use factors, and the relationship of certain consumer life styles to the uses made of television. The method of gathering the sample for this study and the primary means of analyzing the data are discussed in the following chapter.

CHAPTER III

METHODOLOGY

This chapter consists of two main parts: survey methodology and factor analysis methodology. In the first of these, the method of selecting the sample is reviewed. The demographics of the sample appear in Chapter IV. In the second part of this chapter, options in conducting a factor analysis are discussed, and the rationale for choices made in the study is presented.

Survey Methodology

The population utilized for this study was all adults over the age of eighteen residing in Fremont, Ohio. According to the 1970 census data,⁶⁷ the population of the city totals 18,490, approximately half of whom are adults. The city of Fremont was chosen because its overall demographics are within a few percent of national averages on all indices except those of Black and Spanish-surname minorities.⁶⁸ These latter are insufficiently represented in the population by comparison to national figures. Fremont has both locally employed and commuter populations and is not a college or university town.

⁶⁷United States Department of Commerce, Bureau of the Census, 1970 Census of Population, Volume 1, Part 1 and Part 37, Sections 1 and 2 (Washington, D.C.: Government Printing Office, June, 1973).

⁶⁸The population of Fremont is statistically low on Blacks and high education Spanish-surname residents by comparison to national figures.

Cable television serves the area with ten commercial (and one public) television stations. All three national networks are available. On the basis of age, sex, income and education, the city closely approximates national norms and is, consequently, the type of population possessing appeal for advertising and broadcasting researchers.

The sampling method was to number the city blocks and draw a random sample of blocks by means of a table of random numbers. A map of Fremont, prepared by the Office of the Sandusky County Engineer, dated September, 1975, was used to determine the limits for the survey. All streets within a radius of two miles from the county courthouse were included. The greater Fremont area was then divided into three concentric sections reflecting the average age and value of homes. This procedure assumes that housing generally reflects family income and stipulates the inclusion of low, middle and high income families in the sample. 1) The center section of the city included the old downtown area, predominantly low income and minority group housing; the Black and Spanish-surname populations of Fremont are largely concentrated in this area; there are, also, a few well-maintained older large homes and older apartments in the area. 2) The second section extends from the center section approximately to the city limits; it contains a mixture of low and middle income housing of the older variety, a few newer apartment complexes, and a section of large well-maintained houses that reflect high income,

upper-middle class residents. 3) The third section surrounds the town extending inside and outside the city limits to include the newer homes in developments in middle and high income areas; it also includes a few originally rural residences most of which are now low income housing.

Each section of the city was numbered by blocks from one to one hundred fifty, so that each section was identical in size and all blocks were included. A table of random numbers was utilized by draw a sample of fifty numbers.⁶⁹ Each number corresponded to one block within all three of the sections of the city, and allowed for the construction of a stratified, random sample. The sample was evaluated to insure the inclusion of Black and Spanish-surname residence districts in the areas to be covered. During the surveying, sex and race on returned questionnaires were periodically tabulated to attempt to insure a proportionate distribution of sex and race, corresponding to Fremont demographics. Insofar as possible, this sample is an accurate reflection of the total population of Fremont.

A surveyor visited each house or apartment around the specified blocks and left questionnaires with every adult who was willing to accept one. The person answering the door was asked if other adults in the house would fill out questionnaires, and forms were left if the response was positive.

⁶⁹John T. Roscoe, Fundamental Research Statistics for The Behavioral Sciences (New York: Holt, Rinehart and Winston, Inc., 1975), p. 410.

This was done to insure inclusion of men and working members of families as well as others who, for some reason, did not answer the door. A second visit was made to every house when no one was at home during the first call. When questionnaires were left, the surveyor asked the subject to leave the completed forms near the mailbox or door the following day. Two or three attempts were made to retrieve the questionnaires, including repeated door calls and written notes. Approximately 2,200 questionnaires were passed out and 1,795 usable ones were collected. This is a response rate exceeding 81 percent which is exceptionally high for survey research of the general population, and results from using a minimum of two calls to leave a questionnaire and a minimum of two calls to retrieve it. Although three or more calls were made to the homes of racial minorities to pick up completed questionnaires, the response rate from minorities was poor. No compensation was employed.

Factor Analysis Methodology

Numerous options are readily available to the researcher when factor analyzing by computer. These options concern the model selected, method of rotation, the number of factors to be rotated, the number of loadings minimally required to determine a factor, and the interpretation of loadings. A sound recommendation of scholars in the field of statistical methodology is to utilize a variety of approaches, if justified by the design of the study, to obtain the clearest and most

reliable picture of factor structure and factor composition.⁷⁰ Interpretations based on a single analysis are of little more than suggestive value since the exercise of alternate options can vary both factor structure and factor composition.⁷¹

Model Selected

The principal factors model was selected over the principal components model because, although the two produce very similar results when the number of variables is large,⁷² the principal components model does not remove error variance which is desirable in a study with a very large sample.⁷³ Principal components analysis is also more appropriate for a homogeneous population than the heterogeneous populations typical of mass communication research. In this study, the correlation matrix was factored, and squared multiple correlations were utilized as initial communality estimates.⁷⁴

⁷⁰Chester W. Harris, "On Factors and Factor Scores," Psychometrika 32 (1967): 363-379.

⁷¹J. Scott Armstrong and Peer Soelberg, "On the Interpretation of Factor Analysis," Psychological Bulletin 70:5 (1968): 364.

⁷²Raymond K. Tucker and Lawrence J. Chase, "Factor Analysis in Human Communication Research," paper presented at the International Communication Convention, Chicago, April 1975, p. 9.

⁷³David J. Weiss, "Factor Analysis and Counseling Research," Journal of Counseling Research 17 (1970): 482-484.

⁷⁴William W. Cooley and Paul R. Lohnes, Multivariate Data Analysis (New York: John Wiley & Sons, 1971), pp. 149-150.

Method of Rotation

The two types of factor rotation in common use in communications research are the orthogonal and the oblique; of these, the most frequently utilized method of rotation is varimax. Quartimax is another method intended for analysis of the variance composition of variables which tends to load most variables on the first factor, making it unsuitable for research that has the goal of locating many approximately equivalent factors.⁷⁵ Varimax provides a solution emphasizing high and low loadings on all factors. Equimax is a compromise between the two methods and is considered a more specialized form.⁷⁶

Oblique rotation is considered more difficult to interpret since the factors remain correlated and high loadings can appear for the same variable in many factors. Many scholars recommend that both orthogonal and oblique rotations be employed in order to substantiate the reliability of results across methods.⁷⁷ In this study, multiple varimax and oblique rotations of principal factors were performed on the variables in order to compare results. From five to eighteen factors were rotated in varimax analyses, and deltas of $-.1$ and $-.5$

⁷⁵David J. Weiss, "Further Considerations in Applications of Factor Analysis," Journal of Counseling Psychology 18 (1971): 90.

⁷⁶Norman H. Nie, et al., Statistical Package for the Social Sciences (New York: McGraw-Hill, 1975), p. 485.

⁷⁷R. J. Rummel, Applied Factor Analysis (Evanston: Northwestern University Press, 1970), p. 338.

were employed in oblique rotations of ten and fifteen factors.⁷⁸ As is evident in Table 8, all of the twelve factors appearing in the orthogonal rotations also appeared in the oblique rotations. In addition, one other factor was faintly suggested in one oblique rotation; it corresponds to the concept of using television for conversation as posited in the hypotheses for this study. This factor did not appear in any other rotation possibly due to the adult composition of the sample and the inadequacy of the relevant statements. The function of television as a source of conversational material is based primarily on Smith's study of teenagers,⁷⁹ although it also appeared in Lichty's study of viewers of "The Real McCoys." The primary conclusion drawn from the consistency with which the factors replicated is that the twelve factors shown in the table and described in the uses analysis are reliable indicators of the major functions of television viewing.

The shifting of individual factors suggests that factor structure is not invariant.⁸⁰ It follows that undue importance should not be given to the amount of variance accounted for by

⁷⁸A delta of $-.1$ represents the least correlated, most oblique solution, while a delta of $-.5$ represents a solution that is nearly orthogonal. Statistical Package for the Social Sciences, p. 495.

⁷⁹David M. Smith, "Some Uses of Mass Media by 14 Year Olds," Journal of Broadcasting 16:1 (Winter, 1971-72): 37-50.

⁸⁰In contrast to the opinion of R. J. Rummel, Applied Factor Analysis, p. 18. See J. P. Guilford, "Rotation Problems in Factor Analysis," Psychological Bulletin 81 (1974): 498-501.

Table 8
USES FACTOR ANALYSIS FACTOR STRUCTURE

FACTORS													
	Boredom												
	Pass Time												
	Modeling												
	Escape												
	Distraction												
	Social Substitute												
	Company												
	Not Using Television												
	Background Noise												
	Information												
	Pleasure												
	Arousal												
	Number of Factors Rotated												
5													
6													
7													
8													
9													
10													
12													
13													
14													
15													
18													
Oblique (-.1)													
10													
(-.5)													
10													
Oblique (-.1)													
15													
(-.5)													
15													
Pilot 7													
Random Sample 10													

a single factor since its size is a result of 1) the position of that factor in the factor structure, as well as 2) sample size and 3) the number of factors extracted. An example of a factor that sometimes makes substantial contributions to the results and other times occupies a less significant position is BACKGROUND NOISE. It appeared as the first factor, accounting for over fifty percent of the variance in two rotations (see Table 9); otherwise, it appeared much lower in the factor list. Also, COMPANY appeared as the first factor in three oblique rotations, but moved to a lesser position in other rotations. AROUSAL occurred as the first factor in the majority of instances, but not uniformly. Consequently, one should not conclude that AROUSAL is the most important factor in the results, rather that it shares a major role with several other factors. In addition, in studies with large samples, the total percent of common variance accounted for is typically high. However, as the number of factors rotated increases, the percent of variance accounted for by each position in the factor structure goes down. Misunderstanding of these phenomena leads to the placing of inordinate importance on the percent of variance for which a factor accounts.

Number of Factors Rotated

Traditional advice for selecting the number of factors to be extracted is to examine the history of the domain of variables. In instances where there is little or no history, use of multiple numbers of factors rotated can provide a

Table 9
Percent of Variance Accounted for in Alternate Rotations
Uses Factor Analyses

Factor	Number of Factors Rotated					
	10	12	13	14	15	18
Arousal	56.5%	54.4%	53.4%	52.7%	6.4%	6.3%
Pleasure	6.8	10.8	10.7	10.5	10.4	10.1
Information	7.7	7.5	7.4	6.5	7.3	7.1
Background Noise	11.1	1.5	2.0	7.3	51.9	50.4
Not Using Television		4.6	4.6	1.5	1.5	1.5
Company	4.7	2.0	6.6	1.9	1.9	1.9
Social Substitute	3.3	6.6	3.2	4.6	4.5	1.4
Distraction	3.1	3.1	3.1	3.2	3.2	3.2
Escape	2.7	3.3	1.5	3.1	3.1	3.0
Modeling	2.1	2.8	2.7	2.7	2.7	2.7
Pass Time		2.1	2.2	2.1	2.2	4.4
Boredom			1.4	1.4	1.4	2.2
Residual	1.9	1.5	1.3	2.4	3.4	5.6
Total Variance Accounted For*	98.1%	98.6%	98.7%	97.6%	96.6%	94.4%

*By maximum interpretable factors (Rotations 10, 11, 12: for total factors rotated minus one; Rotations 13, 14, 15, 18: for twelve factors).

history. Rotating too few factors seems to explain anomalous conjunctions of variables in the small rotations. Guilford sees more harm in extracting too few than too many factors and states that the commonly used criteria for extraction are too conservative.⁸¹ The INFORMATION/MODELING factors provide a clear example of what may have flawed some previous factor analytic studies of the uses of television: when too small a number of factors are rotated, compression of variables occurs, resulting in general factors lacking unitary concepts. Mixed loadings tend to be a problem created by too few factors rotated. MODELING appears as a clear factor in Rotation 10 and subsequently, but variables from it mix with the INFORMATION variables in smaller rotations. They generally have small and mixed loadings. This same phenomenon occurred with BACKGROUND NOISE/NOT USING TELEVISION variables and the COMPANY/SOCIAL SUBSTITUTE variables. In larger rotations, the variables making up one factor cleanly split away from a related factor and support a separate concept. Rotating too many factors spreads the number of available factors too thinly, causing uninterpretable factors to appear. These are frequently called residual factors, but may appear inside an otherwise interpretable structure. The number of residual factors is as much a function of sample size as the number of factors rotated.

⁸¹J. P. Guilford, "When Not to Factor Analyze," Psychological Bulletin 49 (1952): 28-29.

There are three possible goals for factor analytic research, only two of which pertain to this study. In many studies it is the goal of the research to define a single, unitary, umbrella dimension; this is frequently the case in analysis of semantic differential scales of concepts such as persuasibility or machiavellianism. In other cases, the goal of the research is to locate a reasonable number of clearly distinct factors that can be utilized in other research; neither too few nor too many factors provides a heuristic result. This is the case with the life style analysis appearing in this study. The aim of the life style portion of the questionnaire and the analysis was not to reduce the data to a very general factor that does not distinguish between groups of people, nor was it to elicit every kind of consumer life style that exists in any degree.

A third general goal is to locate all the possible factors relating to a single concept, subject only to the limitation that items not in the original questionnaire cannot appear. This was the aim of the uses of television viewing portion of this study: to locate all the various factors that reflect how people use television viewing. It is inherent in the statistical procedure of factor analysis that if all subjects responded the same way to items, no factor including those items would appear in the factor structure since there would be no variance for which to account. Factors represent

dimensions upon which people differ. Which goal the researcher chooses in turn influences the determination of the number of factors rotated and the quantity of rotations. When the aim is a unitary factor, small numbers may be rotated; when the aim is a moderate number of clear factors, a variety of numbers should be rotated to locate the approximate point at which compression ends and spread between variables begins. Equally, when the goal is understanding of all permutations of a concept, a sequence of numbers of factors should be rotated in order to precisely determine the maximum quantity of interpretable factors without reference to the amount of variance accounted for by the separate factors.

Determination of Factors

One criteria for determining the number of factors to be interpreted is the use of an eigenvalue cutoff of 1.0. Another is the Scree test. Several researchers have concluded that these procedures underestimate the number of interpretable factors when there are a large number of variables or a large sample size.⁸² This study contains both; consequently, the history of the variable domain was used in combination with replication through multiple rotations to determine the number of factors to be interpreted, as recommended by Tucker and Chase.⁸³

⁸²Lloyd G. Humphries, "Number of Cases and Number of Factors: An Example Where N is Very Large," Educational and Psychological Measurement 24 (1965): 465.

⁸³Tucker and Chase, p. 13.

Interpretation of Loadings

Another controversial area in the literature of factor analysis is that of the size and complexity of variable loadings. This study utilized a minimum loading of .30; sample size for this study is sufficiently large to justify this procedure.⁸⁴ Variables with mixed loadings were included only in the factor where the highest loading appeared, but the 60/40 or 50 percent criteria for purity were not employed. In virtually all factors in Rotation 13 of the uses portion of this study, mixed loadings were not a problem because two or more variables loaded purely with the factor. The sole exception was the PASS TIME factor in which one of the two variables had a mixed loading. Ten of the remainder of the forty variable loadings had other loadings slightly above .30, and only four of these approached within .10 of the interpreted loadings.

Random Subsample Validation

Armstrong and Soelberg, among others, recommend factor analysis of one or more subsamples with comparison of the results in order to have a measure of the reliability of the results.⁸⁵ A random subsample of twenty-five percent of the subjects in this study (approximately 400 people) was drawn by means of the Statistical Package for the Social Sciences

⁸⁴Tucker and Chase, pp. 14-15.

⁸⁵Armstrong and Soelberg, p. 363.

and subjected to varimax factor analysis; ten factors were rotated. The factor structure and composition of the sample was compared with the results of the analysis of all 1,795 subjects in Rotation 10. The criteria for equivalence was set at a minimum of three variables per factor with loadings within .10 of the variable loadings in the overall analysis.

Five factors cleanly repeated, AROUSAL, BACKGROUND NOISE, INFORMATION, PLEASURE and DISTRACTION, with similar variable loadings, although one of the loadings for PLEASURE was higher than the criterion, and PLEASURE and DISTRACTION shifted in the factor structure from factor IV and VII, respectively, to V and VI. In addition, the PASS TIME factor appeared in the random sample but not in the overall analysis at this rotation size. Factor IV in the random sample exhibited the phenomenon of compression by mixing variables for COMPANY and SOCIAL SUBSTITUTE; the variable loadings were especially high. ESCAPE and MODELING both appeared in the overall but not in the random sub-sample. Factors VIII, IX and X were considered uninterpretable due to lack of three or more loadings above .30 and probably represent residual variance for that size sample. The factor structure for the random sample using rotation of ten factors is reported at the bottom of Table 8. The total common variance accounted for in this subsample was 92.9%. This analysis supports the need for even larger sample sizes than those advocated by Comrey.⁸⁶

⁸⁶Andrew L. Comrey, A First Course in Factor Analysis (New York: Academic Press, 1973), p. 200.

CHAPTER IV

FINDINGS

There are seven sets of results to this study; each will be reported in a separate section to maximize clarity. The first section contains the frequency distribution of the responses and emphasizes the sample characteristics. The second section describes the factor analyses of the uses of television items from the questionnaire; this is the focal point of the research, to which other variables are related, and upon which the major conclusions are dependent. The third section contains crosstabulations between the variables for each factor by age and sex suggesting the type of person who responded strongly positively to the variables. The fourth and fifth sections provide the results of multiple discriminate analyses of the uses factors in relation to the demographic information and the television programs viewed. The sixth section reports the factor analyses of the consumer life style questionnaire items. The final section provides the results of canonical correlations between the uses and life style factors. These findings have significance both for practical application of analysis of television uses to industry situations and multivariate methodology.

Frequency Distribution of Sample Responses

The frequency distribution of the responses to items on the survey questionnaire were calculated using the Statistical

Package for the Social Sciences on the Bowling Green State University IBM 360/370 computer. Since the frequency distribution contains the results of tabulation of responses to over one hundred and fifty questionnaire items, it is not reported due to its length. This section concentrates on the frequency distribution of the characteristics of the sample. Approximately two thousand two hundred questionnaires were distributed in Fremont, with the usable returned questionnaires providing a total sample of 1,795 people, a rate of return of 81.5 percent. Sample size varies from table to table because some individuals did not complete all of the items.

Sample Demographics

The total sample breaks down into 666 men and 1,061 women based on the 1,727 who answered the sex question. This is an acceptable forty-sixty relationship between men and women in the sample population, although it differs by 8.6 percent from the national distribution of sex in adults over eighteen years (see Table 10). Age breakdown for the sample appears in Table 11. Of the total N of 1,731, 65.8 percent (1,138 people) fall into the 18-49 age group of primary interest to advertisers; nationally, 63.9 percent of adults fall into this group. The older age group, 50 and above years, accounts for 34.2 percent of the sample, or 593 people. These quantities were sufficient to allow for independent statistical manipulation of either group in these analyses.

Table 10
Sex Demographics of Sample Population

N = 1,727

Sex	Number	<u>Sample</u>	<u>United States</u>
		Percentage Of Adults Over 18 Years	Percentage* Of Adults Over 18 Years
Male	666	38.6%	47.2%
Female	1,061	<u>61.4</u>	<u>52.8</u>
		100.0%	100.0%

*Based on Target Group Index, Spring 1976, p. 2.

Table 11
Age Demographics of Sample Population

N = 1,731

Years of Age	Number	<u>Sample</u>
		Percentage Of Age 18-63
18-29	562	32.5%
30-39	342	19.8
40-49	234	13.5
50-62	352	20.3
63	<u>242</u>	<u>13.9</u>
	1,731	100.0%
National United States, 18-49 63.9%*		
Sample, 18-49 65.8%		

*Based on Target Group Index, Spring, 1976, p. 2.

Table 12
Education Demographics of Sample Population

N = 1,716

Highest Education Completed (Adults Over 18 Years)	Sample Number	Sample Percentage	United States Percentage*
Elementary	114	6.6%	] 72.8%
High School	1,069	62.3	
Two Yr. College or Tech.	271	15.8	] 27.2
4 Yr. College or University	192	11.2	
Graduate School	<u>70</u>	<u>4.1</u>	
	1,716	100.0%	100.0%

*Based on Target Group Index, Spring 1976, p. 2. Separate breakdown for education groups not available.

Table 12 shows the frequency response to the education item. Based on an N of 1,716, approximately 69 percent of the sample completed either elementary or high school; this compares with 72.8 percent nationally. The remainder of the sample, 31 percent, said they had some college or post-high school training; this corresponds to 27.2 percent of the national population over age eighteen.

The demographics for income are less similar to national demographics. Each subject was asked to mark the total annual family income, so the results do not reflect the earned income of the respondent but rather the income on which the family lives. Table 13 shows that 69.2 percent of the sample falls in the over ten thousand dollar income bracket, which

compares with 61.5 percent nationally. In the sample, 30.8 percent have incomes under ten thousand dollars although nationally the figure is 38.5 percent. This means the sample is somewhat deficient in low income respondents.

Table 13
Income Demographics of Sample Population

N = 1,565

Total Family Annual Income	Sample Number	Sample Percentage	United States [*] Percentage
Under \$5,000	176	11.3%	16.5%
\$5,000-\$10,000	305	19.5	22.0
\$10,000-\$20,000	761	48.6	41.8
Over \$20,000	<u>323</u>	<u>20.6</u>	<u>19.7</u>
	1,565	100.0%	100.0%

*Based on Target Group Index, Spring 1976, p. 3.

Table 14 indicates that roughly half the sample population has children under eighteen years living at home, leading to the assumption that the other half of the sample either does not have children or they are grown and living elsewhere. This corresponds very closely to national percentages.

The distribution of responses by race is markedly skewed as is evident in Table 15. Even though extra effort was made to obtain completed questionnaires from minorities, the response rate still fell far short of reflecting the true percentages of minorities either in local or national demographics.

This limits the generalizability of the research results.

Table 14

Children Under 18 Demographics of Sample Population

N = 1,583

Children At Home	Sample Number	Sample Percentage	United States* Percentage
Do have children under 18 living at home	821	51.9%	51.6%
Do not have children under 18 living at home	<u>762</u>	<u>48.1</u>	<u>48.4</u>
	1,583	100.0%	100.0%

*Target Group Index, Spring 1976, p. 3.

Table 15

Race Demographics in Sample Population

N = 1,780

Race	Number	Sample Percentage (Adults Over 18)	United States* Percentage (Adults Over 18)
White	1,723	96.8%	88.8%
Black	19	1.1	9.6
Spanish	37	2.1	1.6
Other	<u>1</u>	<u>0.1</u>	<u>100.0%</u>
	1,780	100.0%	

*Target Group Index, Spring 1976, p. 2.

Other Sample Characteristics

Other specific questions in the survey are relevant to description of the sample population. About 82 percent of the sample has lived in fewer than three different cities in the last ten years (Var. 51), suggesting that the population has been more stable than the national average. At the same time, 56.6 percent expect to move at least once in the next five years (Var. 53); and 59.2 percent of the sample prefers small town to city living (Var. x24), as well as liking the fresh air and exercise that go with rural life (Var. x10 and x22). A more extreme group, 77.0 percent, definitely prefer living in a house to an apartment. More than half, 57.3 percent, had not borrowed money recently, although 33.8 percent have; 56.3 percent are not in debt, and half the sample prefers paying cash to using credit. Over half, 51.3 percent, strongly agrees that there are too many ads on TV, and 64.0 percent claim to read the newspaper daily. Subjects in this survey consistently under-reported the quantity of viewing they do if reported Nielsen figures of 6.83 hours are accurate.⁸⁷ Only 34.9 percent of the sample admits to watching television more than four hours a day. This type of question demonstrates the weakness of respondent self-report for some kinds of information.

Based on the results of the frequency distribution of demographic items, the sample population matches the national

⁸⁷Source: NTI/NAC Audience Demographics Report, February 1976, reported in Broadcasting Yearbook 1977 (Washington, D.C.: Broadcasting Publications Inc., 1977), p. B-176.

population on scales such as age, education, and children, but does not match on sex, income, or race. The sample is particularly deficient in minority group members, and men. This may limit the generalizability of the study slightly overall and imposes greater limits when generalizing about the deficient groups.

Factor Analyses of Uses

This section reports the results of the rotation of thirteen uses factors, discusses the methodological options exercised, and demonstrates the reliability of the factor structure and factor composition. Principal axis factor analysis was performed on variables 1-40 and variables z29 and z38 of the questionnaire using the Statistical Package for the Social Sciences on the IBM 360/370 computer. These variables are the uses statements generally beginning "I watch television because....." Factor analysis was used to reduce the data and reveal its underlying structure. Previously, the variables on the questionnaire had been tested in a pilot to demonstrate the reliability of the variables, many of which had been employed in earlier research by Greenberg, Foley and others. In addition, a random sample of cases was drawn from the larger sample and factor analyzed providing cross-validation of these results. Responses were also weighted to correspond to the correct national sex ratio in another analysis to remove any possible sex bias. Finally, consistent replication in multiple methods of rotation and varying numbers of factors rotated has

provided a solid foundation for interpretation of the results.

The variables comprising the uses statements were rotated and interpreted fifteen separate times, eleven times orthogonally and four times obliquely, in addition to the pilot and random subsample. The number of factors rotated varied from five to eighteen. Table 8 depicts the factor structure in seventeen analyses, and Table 9 shows the percent of variance accounted for by the separate factors in the six orthogonal analyses above ten. Rotation 13 was selected as representative of the rotations above ten. When fewer than ten factors were rotated, the factor structure becomes compressed and what appear as separate factors in larger rotations load together disguising some factors and obscuring interpretation. Rotations 15 and 18 contain several residual factors; Rotation 14 is virtually identical to Rotation 13 except for position shifts for some factors and the twelve factors account for the most variance in Rotation 13.

Results of Rotation 13 of Uses Factor Analyses

Varimax rotation of thirteen factors using principal factors analysis with squared multiple correlations as communality estimates, results in twelve interpretable factors. They account for 98.7 percent of the common variance, excluding the thirteenth factor which represents primarily residual variance. A minimum of three interpretable variables with loadings above .30 was used to determine nine of the factors; three factors were interpreted with two variables loading above .40 because

Table 16
Factor Structure of Rotation 13

Factor	Variable Loadings Defining Factor					Percent Variance Accounted For
AROUSAL	.76	.57	.47	.47	.31	53.4%
PLEASURE	.80	.74	.36			10.7
INFORMATION	.70	.56	.54			7.4
NOT USING TELEVISION	.80	.54				4.6
COMPANY	.66	.61	.54			6.6
SOCIAL SUBSTITUTE	.62	.60	.53	.30		3.2
DISTRACTION	.60	.56	.54	.48	.44	3.1
MODELING	.64	.55	.52	.43	.43	2.7
PASS TIME	.61	.44				2.2
BACKGROUND NOISE	.74	.65	.60			2.0
ESCAPE	.41	.41	.36	.33		1.5
BOREDOM	.51	.40				1.4
RESIDUAL						<u>1.3</u>
						100.0%

they consistently replicated in other rotations, and accounted for more than two percent of the variance in one or more rotations. Mixed loadings occurred in only five instances out of forty-one, and in all cases only the highest loading was selected. The rotated factor matrix is not reported

because of its very large size and the redundancy of its information. All variable loadings are below .35 on other factors except for the instances already noted.

In Rotation 13, Factor I is labeled AROUSAL, and it accounts for 53.4 percent of the variance (see Table 16). Factor II, PLEASURE, accounts for 10.7 percent of the variance. Factor III, INFORMATION, accounts for 7.4 percent; these are the three most substantial factors in this rotation, although BACKGROUND NOISE accounts for over fifty percent of the variance in some rotations and should, consequently, be considered substantial. The remainder of the variables in Rotation 13 are: Factor IV, COMPANY, accounting for 6.6 percent of the variance; Factor V, NOT USING TELEVISION, accounted for 4.6 percent; Factor VI, SOCIAL SUBSTITUTE, accounted for 3.2 percent; Factor VII, DISTRACTION, accounting for 3.1 percent; Factor VIII, MODELING, accounting for 2.7 percent; Factor IX, PASS TIME, accounting for 2.2 percent; Factor X, BACKGROUND NOISE, accounting for 2.0 percent; Factor XI, ESCAPE, accounting for 1.5 percent; and Factor XII, BOREDOM, accounting for 1.4 percent. The residual variance appearing in Factor XIII is 1.3 percent. Table 9 in Chapter III displays the percent of variance accounted for in six rotations making clear that the two factors occupying less than two percent of the variance in Rotation 13 play a larger role in other rotations. The goal of this portion of this study to describe and examine all the possible uses of television since any use may move to

the foreground when a particular segment of the viewing audience is studied.

AROUSAL

Factor I appears in Table 17 and Table 18 which show the composition of the factor in Rotation 13 and the way in which the variables and loadings replicated in other orthogonal and oblique rotations. The factor was named AROUSAL to distinguish it from Factor II, PLEASURE; the former is consistently comprised of stronger, more enthusiastic statements than the latter. The statements making up the factor were originally developed by Greenberg in his study of British children, and AROUSAL originally appeared in Greenberg's study, but appeared further down in the factor structure. It accounts for

Table 17

Uses Factor Analysis: Rotation 13

Factor I: AROUSAL

Variables	Percent of Variance Accounted For: 53.4	Loadings
14. It excites me		.76
6. It's thrilling		.57
19. It's so much fun		.47
23. Television stirs me up		.45
21. I enjoy telling people about television programs.		.31

13 percent of the variance in Greenberg's study of children but for over fifty percent of variance in eleven of the rotations in this analysis. One minor anomaly is that AROUSAL

shifts to the position of Factor IV in Rotations 15 and 18, and appears as Factor XIII in the oblique rotation of 15 factors (see Table 8 in Chapter III). This phenomenon makes clear the need for inspection of multiple rotations to determine the weight of evidence. Since AROUSAL occupies a salient position in virtually all rotations, its importance to the factor structure is paramount. As demonstrated by Table 18, the composition of the AROUSAL factor also remains firm in alternate rotations. This factor constitutes the primary use of television according to this study.

Table 18
Loadings of Variables Forming AROUSAL Factor
in Alternate Rotations
Uses Factor Analyses

Variables	Orthogonal Rotation										Oblique Rotation*		
	5	6	7	8	9	10	12	13	14	15	18	10	15
14.	.67	.69	.67	.65	.72	.72	.71	.76	.72	.71	.70	.80	.83
6.	.55	.64	.62	.59	.59	.60	.61	.57	.59	.58	.59		.72
19.	.49	.51	.54	.53	.56	.53	.51	.47	.46	.45	.45	.64	.61
23.	.51	.49	.49	.48	.51	.51	.50	.46	.46	.37	.37	.59	
21.	.40		.43	.42	.49	.39	.37	.31	.30			.53	

*The oblique rotations reported in these columns in this and subsequent similar tables utilized a $-.1$ delta.

Table 19
Uses Factor Analysis: Rotation 13

Factor II: PLEASURE

Variables	Percent of Variance Accounted for: 10.7	Loadings
28. I just enjoy watching		.80
11. I just like to watch		.74
20. Time passes more quickly when I am watching TV		.36

PLEASURE

Factor II resembles Factor I but is comprised of milder statements of enjoyment (see Table 19, PLEASURE). This factor appeared in Greenberg's original study, but he named it "Habit" after the highest loading variable despite the fact that the remainder of the variables seem to depict a clearer picture of simple enjoyment of viewing television. A similar function for television viewing appeared in Lichty's study which he called "Recreation." Foley's Q-analysis distinguished a "Diversion" factor. Table 20 shows that the three statements loading in Rotation 13 appear consistently throughout the orthogonal and oblique rotations in this study. An additional statement, consistent with the content of the others, appears in the smaller and the oblique rotations. The item (29) is "it gives me something to do," which loads with the PLEASURE factor in the smaller rotations, but loads on the PASS TIME factor generally after Rotation 8. The

PLEASURE factor occurred in its negative form in the oblique rotations. PLEASURE recurs as the second factor in two-thirds of the rotations of this study (see Table 8).

Table 20

Loadings of Variables Forming PLEASURE Factor
in Alternate Rotations

Uses Factor Analyses

Variables	Orthogonal Rotation											Oblique Rotation	
	5	6	7	8	9	10	12	13	14	15	18	10	15
28.	.71	.70	.74	.73	.75	.77	.76	.80	.80	.86	.83	-.83	-.92
11.	.72	.73	.74	.73	.76	.75	.76	.74	.74	.70	.72	-.80	-.77
20.	.55	.54	.48	.45	.41	.40	.39	.36	.37	.36	.36	-.53	-.52
29.	.56	.53	.47			.44						-.56	-.56

INFORMATION

Factor III, INFORMATION, appears in Table 21. It is comprised of three statements reflecting what has been traditionally called the news or surveillance function. All three statements refer to the "real world" as seen on television news and documentary and interview programs, not the imaginary worlds of prime-time series and situation comedies. This factor, utilizing different wording in the statements, appeared in pilot study of uses and was called "Learn About the World." It also occurred in the Wenner and the Davis,

Table 21
Uses Factor Analysis: Rotation 13
Factor III: INFORMATION

Variables	Percent of Variance Accounted for: 7.4	Loadings
27. Television programs give me new insights into our complex world		.70
25. I like the way television lets you get close to important people		.56
2. Watching TV helps to keep me informed of the new things that are happening in our country.		.54

et al., studies of older viewers. Foley anticipated finding such a factor and included statements to elicit it, but failed to find the factor unmixed with entertainment uses. Some of his statements were utilized in this study, and succeeded in detecting the information function. The factor replicated as the third factor in three-quarters of the orthogonal rotations as can be seen in Table 8. Table 22 shows the repetition of loadings on these three variables is consistent across rotations. Variables 32 and 24 appear in the smaller rotations, but shift to the MODELING factor, Factor VIII, after Rotation 12. These items are "It shows how other people deal with the same problems I have" and "I can learn what can happen to me."

Table 22
Loadings of Variables Forming INFORMATION Factor
in Alternate Rotations

Uses Factor Analyses

Variables	Orthogonal Rotations											Oblique	
	5	6	7	8	9	10	12	13	14	15	16	10	15
27.	.56	.60	.61	.63	.64	.63	.64	.70	.72	.72	.72	.65	.75
25.	.56	.61	.58	.57	.60	.59	.62	.56	.54	.54	.53	.63	.60
2.	.50	.47	.51	.53	.51	.55	.54	.54	.55	.55	.55	.57	.58
32.	.45	.53	.50	.45	.47	.46	.41					.51	.47
24.	.45	.50	.49		.47	.46	.43					.49	.47

COMPANY

Factor IV in this particular rotation is COMPANY, depicted in Table 23. It is generally comprised of three variables suggesting a lonesome person lacking companionship from other people, who uses television as an antidote to loneliness. The factor shifts from first to tenth position in various rotations (see Table 8), and one item unaccountably drops away in two rotations (see Table 24). Although this factor's position in the structure changes, its consistent appearance suggests that a viable dimension has been tapped. A companionship dimension appeared in both the Wenner and Davis, et al., studies.

Table 23

Uses Factor Analysis: Rotation 13

Factor IV: COMPANY

Variables	Percent of Variance Accounted for: 6.6	Loadings
31. It makes me feel less lonely		.66
17. It keeps me company when there's no one to talk to		.61
9. I won't be alone		.54

Table 24

Loadings of Variables Forming COMPANY Factor
in Alternate Rotations

Uses Factor Analyses

Variables	Orthogonal Rotation											Oblique	
	5	6	7	8	9	10	12	13	13	15	18	10	15
31.	.55	.55	.50	.50	.56	.59	.64	.66			.68	.68	.82
17.	.55	.54	.48	.50	.62	.59	.60	.61	.62	.62	.67	.60	.77
9.	.53	.54	.49	.52	.58	.50	.54	.54	.54	.56	.60		.72

NOT USING TELEVISION

The fifth factor was unanticipated and was not reported in previous research. It contains only two variables and changes position readily in the factor structure. In the rotations of fewer than twelve factors, it mixes with BACKGROUND

Table 25

Uses Factor Analysis: Rotation 13

Factor V: NOT USING TELEVISION

Variables	Percent of Variance Accounted For: 4.6	Loadings
33. I often have the television set turned on without really watching it.		.80
39. I often forget that the TV set is turned on.		.54

NOISE, but in the rotation of twelve or more factors, it appears as Factor V, XI, or II. No other variable loads consistently with this factor, but the loadings are sufficiently high to require attention (see Tables 25 and 26). The meaning of the statements seems to be that television is not

Table 26

Loadings of Variables Forming NOT USING TELEVISION
Factor in Alternate Rotations

Uses Factor Analyses

Variables	Orthogonal Rotation												Oblique
	5	6	7	8	9	10	12	13	14	15	18	10	15
33.							.78	.80	.72	.770	.69	.69	.79
39.							.55	.54	.60	.61	.64	.64	.65

necessarily serving a function despite being present in the viewer's environment. One can imagine a circumstance in which

one person regularly turns on the television set without it stimulating interest (or serving a function) for another person who is present. One can imagine that subjects who responded positively to these variables often exclude television's noise and picture from their awareness. Since it is possible for any factor to be considered either in the positive or the negative, reversing the statements makes the factor clearer by suggesting a "mesmerizing" concept. In this case viewers are unable to have the television set turned on without watching it and never forget that it is on. However, since this study is concerned with uses of television viewing, it was determined that an appropriate name for this factor was NOT USING TELEVISION.

SOCIAL SUBSTITUTE

SOCIAL SUBSTITUTE appears as Factor VI in Rotation 13, although it shifts between the fourth to seventh and the twelfth factors in other rotations. It consistently contains three variables, and a fourth variable joins the composition with a minimal loading in the larger rotations. The four variables suggest that television is used for para-social interaction as described by Norton and Wohl, Hess, and Nordenstreng. These statements differ from those in Factor IV, COMPANY, because in this instance, the use of television for companionship seems to be by choice; television is preferred to the company of people, whereas in the COMPANY factor, the statements express a loneliness which television viewing may

Table 27

Uses Factor Analysis: Rotation 13

Factor VI: SOCIAL SUBSTITUTE

Variables	Percent of Variance Accounted For: 3.2	Loadings
1. It's almost like a human friend		.62
36. Watching television is as good as talking to friends		.60
z38. Having a television is like having a friend when you need company.		.53
35. When I watch television, I want to be left alone.		.30

assuage. The person who uses television as a social substitute may indeed be lonely, but he is unaware of the condition and expresses a modicum of anomie; seen in conjunction with the Davis and Wenner studies, he may be said to be seeking

Table 28

Loadings of Variables Forming SOCIAL SUBSTITUTE
Factor in Alternate Rotations

Uses Factor Analyses

Variables	Orthogonal Rotation										Oblique		
	5	6	7	8	9	10	12	13	14	15	18	10	15
1.	.50	.52	.54	.55	.46	.60	.62	.62	.63	.63	.43	-.71	-.71
36.	.46	.47	.57	.52	.56	.63	.61	.60	.60	.60		-.71	-.72
z38.	.64	.65	.66	.66	.60	.53	.52	.53	.53	.53	.32	-.71	-.66
35.					.36	.34	.31	.30	.30	.30		-.41	-.42

social isolation. Although SOCIAL SUBSTITUTE accounts for only 3.2 percent of the variance in Rotation 13, it accounts for as much as 6.6 percent in other rotations (see Table 9). The variables for Factor VI appear in Table 27 and the loadings in other rotations in Table 28. The function of television as a substitute for human interaction clearly appeared in Wenner's study of older adults. It did not appear in Greenberg's study of children or Lichty's study of "The Real McCoys."

DISTRACTION

Distracting oneself from family tensions or work problems seems to be the central concern of Factor VII, which is called DISTRACTION. It appears in the seventh and successive rotations and is comprised of five variables. Three of

Table 29
Uses Factor Analysis: Rotation 13
Factor VII: DISTRACTION

Variables	Percent of Variance Accounted for: 3.1	Loadings
7. I can forget about work		.60
15. When I watch television, I tend to forget about some other things happening around me		.56
8. It calms me down when I'm in a temper		.54
16. I felt more relaxed after I watch television		.48
z29. I watch television so that I can forget about my problem		.44

Table 30

Loadings of Variables Forming DISTRACTION Factor
in Alternate Rotations

Uses Factor Analyses

	Orthogonal Rotation											Oblique	
Variables	5	6	7	8	9	10	12	13	14	15	18	10	15
7.			.51	.61	.61	.60	.60	.60	.62	.62	.61		.65
15.			.37	.53	.52	.53	.56	.56	.56	.53	.50		.44
8.			.48	.51	.52	.54	.54	.54	.54	.58	.60		.65
16.				.42	.42	.46	.48	.48	.48	.44	.41		
z29.			.31	.40	.40	.42	.43	.44	.43	.42	.42		.42

the statements relate directly to forgetting something, and the two additional statements have face validity when connected with a need to forget or be distracted. The statements appear in Tables 29 and 30. As can be seen in Table 8, DISTRACTION occurs regularly as Factor VI or Factor VII in the orthogonal rotations. The percent of variance accounted for by the factor remains virtually constant at slightly over three percent throughout the higher rotations (see Table 9). The DISTRACTION construct was distinct in Greenberg's study of children, from which most of the statements were adapted, and in the pilot study, as the "Forget" factor; it also appeared in Foley's study of older adults.

MODELING

Factor VIII contains five items relating to the concept that was hypothesized as "Learn About Self." That concept appeared mixed with "Learn About the World" in Greenberg's study and in the pilot study on uses of television. It also appeared in Lichty's study as "a guide for behavior." The construct is named MODELING in this analysis to focus on the use of television as a source of role models. It is made up of five variables which occur separately from INFORMATION in the rotations of ten or more factors (see Table 32); in the smaller rotations, the variables loaded with INFORMATION, Factor III. The statements clearly refer to personal behavior not news or world affairs (see Table 31); and the factor consistently accounts for slightly less than three percent of variance in all the orthogonal rotations (see Table 9).

Table 31

Uses Factor Analysis: Rotation 13

Factor VIII: MODELING

Variables	Percent of Variance Accounted for: 2.7	Loadings
10. Television programs give me good advice about how to act in unusual situations.		.64
13. It shows me how I'm supposed to act.		.55
5. It helps me when I'm bored.		.52
32. It shows how other people deal with the same problems I have.		.43
24. I can learn what can happen to me.		.43

Table 32

Loadings of Variables Forming MODELING Factor
in Alternate Rotations

Uses Factor Analyses

Variables	Orthogonal Rotations											Oblique	
	5	6	7	8	9	10	12	13	14	15	18	10	15
10.						.52	.60	.64	.65	.66	.68	.70	.74
13.						.45	.53	.55	.56	.57	.56	.62	.63
5.						.47	.47	.52	.54	.54	.58	.65	.62
32.								.43	.46	.47	.51		.58
24.								.43	.50	.51	.55	.55	.56

PASS TIME

Factor IX, PASS TIME, has only two variables but replicates from Rotation 8 to Rotation 18 (except in Rotation 10). The loadings remain roughly equivalent although the construct shifts from the Factor V position to the Factor XI position,

Table 33

Uses Factor Analysis: Rotation 13

Factor IX: PASS TIME

Variables	Percent of Variance Accounted For: 2.2	Loadings
12. I have nothing better to do		.61
29. It gives me something to do		.44

Table 34
 Loadings of Variables Forming PASS TIME Factor
 in Alternate Rotations
 Uses Factor Analyses

Variables	Orthogonal Rotations											Oblique	
	5	6	7	8	9	10	12	13	14	15	18	10	15
12.				.47	.48		.59	.61	.61	.61	.61		.63
29.				.48	.49		.45	.44	.44	.43	.44		.69

appearing most often as Factor IX (see Tables 9 and 34). The variables that make up the factor fell out in separate factors in the Greenberg study, but the concept of using television to pass the time surfaced in the Lichty study. The steadiness with which the factor reappears in the various rotations suggests that a dimension separate from PLEASURE and from BOREDOM, Factor XI, has been tapped; it appears in Table 33.

BACKGROUND NOISE

Consideration of BACKGROUND NOISE solely as Factor X would be misleading although it does appear in that position in Rotation 13, because it also appears in position I through V in the factor structure in other rotations, as shown in Table 8. When occurring as Factor I, it accounts for over fifty percent of the variance, even though it accounts for only two percent in Rotation 13. The construct consists of

Table 35
Uses Factor Analysis: Rotation 13
Factor X: BACKGROUND NOISE

Variables	Percent of Variance Accounted For: 2.0	Loadings
22. I like to have the set turned on while I am doing other things.		.74
18. I find I can get more done when the TV set is on.		.65
26. Even if I am not watching all the time, I like to keep the set turned on for companionship.		.60

three variables suggesting use of television as background to other activities (see Tables 35 and 36). The two other variables that load with these in the smaller rotations, later separate into NOT USING TELEVISION. The loadings for

Table 36
Loadings of Variables Forming BACKGROUND NOISE
Factor in Alternate Rotations

Uses Factor Analyses

	Orthogonal Rotations											Oblique	
Variables	5	6	7	8	9	10	12	13	14	15	18	10	15
22.	.73	.77	.77	.76	.76	.77	.74	.74	.77	.78	.79	.81	.85
18.	.56	.60	.61	.59	.58	.62	.65	.65	.65	.66	.66	.67	.85
26.	.73	.74	.74	.74	.74	.75	.60	.60	.63	.64	.63	.82	.77

the three marker variables are consistently high, and the concept is visible in Foley's study, though it was not hypothesized for this study. The variables suggest that some people enjoy having background noise while they are occupied with other activities and use television for this purpose rather than radio as might be more traditionally expected. Apparently, the background sound makes some people feel they accomplish more, and it provides a kind of companionship. Elements of this construct were found in Lichty's and Foley's studies. The amount of variance accounted for by the factors varies from 2.0 percent in this rotation to over fifty percent in the rotations of fifteen and eighteen factors.

ESCAPE

Factor XI consists of four variables with only moderate loadings which show the use of television to evade family or other contacts, to allow role fantasies, and to provide a social activity. The factor was named ESCAPE to reflect the two variables that most often grouped in the factor structure in alternate rotations; they refer to avoiding the rest of the family and delaying tasks that need to be done (see Tables 37 and 38). In the sense employed here, "escape" means avoidance in a physical sense, as in literally removing oneself from family or chores by watching the television; it does not refer to forgetting problems as in the DISTRACTION factor. These distinctions are often ignored in the literature when "escape" is postulated as a use of television. Using

Table 37
Uses Factor Analysis: Rotation 13
Factor XI: ESCAPE

Variables	Percent of Variance Accounted For: 1.5	Loadings
34. I can get away from the rest of the family		.41
40. When I watch television, I like to imagine myself taking part in the program		.41
30. Sometimes I watch television just to put off doing other things that need to be done		.36
38. When I visit my friends, we often watch television		.33

television as a source for fantasies in which one assumes a role other than one's real life role is consistent with the concept of using television for avoidance; while imagining oneself in another situation or as another person, one escapes reality. The fourth variable refers to watching television when visiting friends. There is face validity to the idea that when friends choose to watch television as an activity, they are avoiding the need for creating conversation or finding another activity. ESCAPE moved from the Factor VI to the VII and VIII positions and also appeared in the Factor XI and XII positions (see Table 8). It generally accounts for about three percent of the variance (see Table 9). A form of ESCAPE was apparent in Foley's study which he called "Withdrawal."

Table 38
Loadings of Variables Forming ESCAPE Factor
in Alternate Rotations

Uses Factor Analyses

	Orthogonal Rotations											Oblique	
Variables	5	6	7	8	9	10	12	13	14	15	18	10	15
34.	.42	.39	.36			.40	.43	.41	.42	.42		.39	.37
40.							.37	.41	.40	.42	(.27)		
30.	.55	.53	.35			.53	.40	.36	.38	.39		.49	.47
38.	.30	.31	.33			.31		.33	.34	.35	.49		
							++						

++

BOREDOM

The last factor to be interpreted in Rotation 13 was named BOREDOM (see Table 39). It consists of only two variables, but the loadings are of moderate size, and the factor separated from others in Rotations 13-18, and also, appeared in the oblique rotations. It consists of two statements whose content does not appear to be closely related: "It helps me when I'm bored," and "It's a habit." Since the two items appear together, the apparent lack of connection may be more linguistic than real. In Greenberg's study of children, the two items loaded in separate factors, one called "Habit" which is nearly identical to the PLEASURE factor in this study, and in a kind of negative "Pass Time" factor, consisting of "When I'm bored" and "When I have nothing better to do." This

Table 39
Uses Factor Analysis: Rotation 13
Factor XII: BOREDOM

Variables	Percent of Variance Accounted For: 1.4	Loadings
4. It helps me when I'm bored		.51
3. It's a habit		.40

latter statement appears in the PASS TIME factor in this study, but the "bored" statement loaded with the statement on habit. The loading for these two items mixed with other factors in smaller rotations, but occurred as a distinct factor after Rotation 12 (see Table 40). The factor accounts for 1.5 percent of the variance in Rotation 13, for over three percent in all other rotations above twelve. This indicates that some people use habitual television viewing to fill

Table 40
Loadings of Variables Forming BOREDOM Factor
in Alternate Rotations
Uses Factor Analyses

Variables	Orthogonal Rotations											Oblique	
	5	6	7	8	9	10	12	13	14	15	18	10	15
4.								.51	.50	.52	.50	.62	.62
3.								.40	.43	.45	.45	.55	.50

anticipated hours of boredom.

No effort was made to interpret the final factor in any of the rotations because it consists of all the residual variance, which in the smaller rotations is too complex to interpret, and in the larger rotations simply contains all the variance that is left, whether it is meaningfully categorized or not. Twelve factors were determined to be an appropriate factor structure for this study since in the higher rotations of fourteen, fifteen and eighteen factors, factors lacking any loadings above .30 appeared. Utilizing Rotations 13 and interpreting twelve factors produced a clear structure consisting of factors that replicated in many rotations.

Random Subsample Validation

In a randomly drawn subsample of 400 subjects, in which ten factors were rotated, ten factors appeared, although in some instances, pairs of factors compressed into a single factor. These results provide general support for the factor structure reported here.

In order to demonstrate that the factor composition and factor structure were not biased by the 40/60 percent ratio of men and women in the sample, an analysis was made in which the sample was weighted for the correct national sex ratio. All factors replicated with virtually identical loadings. This reconfirms the reliability of these television viewing factors as descriptors of the functions of television for males and females.

Crosstabulation of Variables for Use Factors
and Age and Sex

In order to clarify the way age and sex relate to the individual use factors, the variables loading above .30 in Rotation 13 were crosstabulated with age and sex. The results are reported in Tables 41-52 for males and females in each age group of 18-29 years, 30-39 years, 40-49 years, 50-62 years, and 63+ years. The percentage of the total for both sexes is reported for each variable. Only the sum of the values "medium agree" and "definitely agree" were included in the tables. The inclusion of "weakly agree" responses was assumed to dilute the meaning of the responses. The percentages reported in the tables then refer to those people of each sex who responded positively in their use of television with some strength.

The AROUSAL factor consists of four similar variables with which between five and ten percent of the sample strongly agreed. No great differences between the responses of men and women are evident, but the 18-29 age group responded more frequently. One variable that forms part of the AROUSAL factor refers to the enjoyment of "telling people" about programs rather than admitting direct stimulus by them (Var. 21). This variable produced strongly agree responses for over fifteen percent of the men and nearly twenty percent of women; the preponderance of agreement remained in the youngest age group. Overall, the findings suggest that the use of television for

AROUSAL occurs in five to ten percent of the adult population, with most use occurring in the youngest age group.

Table 41
Crosstabulation of Variables Defining AROUSAL Factor
By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
14. "It excites me"							
Male	6.2%	15	7	2	7	10	41
Female	5.2%	19	11	8	9	8	55
6. "It's thrilling"							
Male	10.2%	20	10	4	18	16	68
Female	9.5%	42	14	15	17	13	101
19. "It's so much fun"							
Male	6.8%	16	4	3	9	13	45
Female	5.7%	15	9	8	16	13	61
23. "It stirs me up"							
Male	6.3%	16	2	6	10	8	42
Female	6.7%	19	16	8	18	10	71
21. "Enjoy telling people"							
Male	15.8%	40	13	13	18	21	105
Female	19.2%	73	37	23	38	33	204

Between thirty and forty percent of the population say they use television for PLEASURE. Women use television more strongly in this way than men, and younger people (18-29) more strongly than older. The use of television to make time pass more quickly (Var. 20) shows a second peak among viewers of

50-62 years, and the other variables show smaller second peaks for that age group.

Table 42
Crosstabulation of Variables Defining PLEASURE Factor
By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
11. "Just like to watch"							
Male	37.5%	93	56	21	44	36	250
Female	39.6%	169	67	50	78	56	420
28. "Enjoy watching"							
Male	32.9%	77	44	27	35	36	219
Female	38.4%	155	63	55	81	53	407
20. "Time passes more quickly"							
Male	37.7%	89	31	23	56	52	251
Female	42.4%	141	81	58	102	68	450

Television is used as a source of INFORMATION by between thirty and seventy percent of the population, depending on the particular variable being considered. Although more than sixty percent of men and women use television to become informed (Var. 2), only thirty percent use it to gain new insights (Var. 27), and about twenty-five percent use it to feel close to important people (Var. 25). This last use is definitely stronger for women than for men although the other information uses also show some increase in strength for

women. Despite the use of television for "keeping informed" (Var. 2) being most prevalent in the youngest age groups (18-29 and 30-39), there is a second peak of use in the 50-62 age group with continuing strength in the 63+ age group. This suggests that there is a definite decline in the use of television for information in the middle age groups between thirty and fifty years.

Table 43

Crosstabulation of Variables Defining INFORMATION Factor

By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
27. "Gives new insights"							
Male	28.5%	48	33	30	35	44	190
Female	32.5%	82	57	55	86	65	345
25. "Feel close to important people"							
Male	23.7%	43	18	17	37	43	158
Female	30.8%	78	52	48	82	67	327
2. "Keeps me informed"							
Male	62.1%	130	70	54	82	78	414
Female	68.2%	195	145	98	176	110	724

In the COMPANY factor, the use of television to not feel alone (Var. 31 and 9) is nearly twice as strong among women as among men; the percent of use ranges from twelve percent for men to twenty-two and twenty-six percent for women.

Almost twice the number of people responded positively to the use of television for company (Var. 17). It appears that men use television for company as much as 27.2 percent and women as much as 40.2 percent. This use occurs with most frequency in the youngest age group and decreases until the 50-62 age group where a rise in the use appears. Young women say they use television for company more strongly than any other group.

Table 44

Crosstabulation of Variables Defining COMPANY Factor
By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
31. "Feel less lonely"							
Male	12.0%	24	11	7	14	24	80
Female	22.4%	78	41	25	46	48	238
17. "Keeps me company"							
Male	27.2%	57	21	19	41	43	181
Female	40.2%	154	71	46	92	64	427
9. "Won't be alone"							
Male	12.0%	28	9	8	19	21	85
Female	26.0%	98	46	30	2	40	276

The NOT USING TELEVISION factor occurs more strongly for women than for men, and the lack of use is preponderant in the youngest age group. This may mean that young adults, or those with children, show the most tendency to leave the

television set on when no one, or no adult, is watching.

Table 45

Crosstabulation of Variables Defining NOT USING TELEVISION

Factor By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
33. "Not really watching"							
Male	17.6%	33	31	20	19	14	117
Female	24.3%	121	48	36	39	14	258
39. "Forget set is on"							
Male	11.9%	19	24	15	12	10	79
Female	13.5%	60	32	19	22	10	143

The use of television as a SOCIAL SUBSTITUTE in human relationships (Var. 1 and 36) occurs with most frequency in the oldest age group, although the desire to watch alone (Var. 35) is strongest in young men, with only slightly less strength for young women. This use refers to a preference for watching television alone instead of relating to other people, not as a direct means of escape from others as appears in the ESCAPE factor. From seven to twenty-one percent of the adult population use television as a SOCIAL SUBSTITUTE. The frequency tabulation shows that over fifty percent of adults "definitely disagree" that they use television for

para-social exchange,⁸⁸ reflecting strongly negative attitudes toward this use.

Table 46

Crosstabulation of Variables Defining SOCIAL SUBSTITUTE Factor
By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
1. "Like a human friend"							
Male	8.6%	8	8	6	14	21	57
Female	12.7%	29	17	17	37	35	135
36. "As good as talking to friends"							
Male	7.2%	9	6	8	8	17	48
Female	7.0%	13	10	7	19	25	74
35. "Want to watch alone"							
Male	21.2%	43	24	22	27	25	141
Female	18.1%	51	27	26	47	41	192
z38. "TV is like having a friend"							
Male	15.3%	21	11	10	20	40	102
Female	21.1%	57	25	26	58	58	224

Television is used to distract people from their work and surroundings (Var. 7 and 15) by about twenty percent of adults. The use is stronger among men than among women, and greater among young people than among the old. A drop in percentage of use for forgetting problems (Var. z29) probably reflects the fact that the item was on the last of eight

⁸⁸ "Definitely disagree" responses are not included in the tables due to lack of space.

pages of questionnaire and was omitted by many respondents. The frequency tabulation shows that between forty and fifty percent of adults "definitely disagree" that they use television to forget about their work or problems, so this use is one that reflects dichotomous attitudes.

Table 47

Crosstabulation of Variables Defining DISTRACTION Factor
By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
7. "Forget about work"							
Male	22.8%	51	24	19	39	19	152
Female	16.9%	70	31	31	27	20	179
15. "Forget about other things around me"							
Male	23.6%	57	31	18	26	25	157
Female	20.3%	78	30	20	43	44	215
29. "Forget my problems"							
Male	7.1%	16	9	6	6	10	47
Female	8.6%	29	11	11	22	18	91

The use of television for MODELING also produced strongly negative responses from some adults. Over sixty-five percent said television does not show them how they are "supposed to act" (Var. 13). One assumes that television behavior is considered too extreme by most of the audience. However, as a source for learning about oneself or getting advice (Var. 5

and 10), television serves between seven and ten percent of men and women. These people occur most strongly in the over 63 age group for both men and women and for women 18-29.

Table 48

Crosstabulation of Variables Defining MODELING Factor

By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
5. "Learn things about myself"							
Male	7.7%	12	7	5	8	19	51
Female	11.6%	30	23	25	18	27	123
13. "Shows me how I'm supposed to act"							
Male	2.7%	1	3	2	3	9	18
Female	1.9%	1	4	3	2	10	20
10. "Gives me advice for unusual situations"							
Male	10.1%	13	8	10	12	24	67
Female	10.7%	30	22	17	17	27	113

The use of television to PASS TIME when nothing else to do is evident (Var. 12 and 29) occurs for between twelve and twenty-two percent of adults. The preponderance of this use appears in the youngest age group, 18-29 years.

To have television function as BACKGROUND NOISE for other activities is a use "definitely" disagreed with by over fifty percent of adults. At the same time, five to nine percent of men strongly make this use of television (Var. 22 and 26), and

Table 49

Crosstabulation of Variables Defining PASS TIME Factor

By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
12. "Nothing better to do"							
Male	13.8%	30	15	5	19	23	92
Female	12.5%	55	18	13	30	17	133
29. "Something to do"							
Male	20.6%	48	25	14	26	24	137
Female	21.7%	97	35	28	40	30	230

Table 50

Crosstabulation of Variables Defining BACKGROUND NOISE Factor

By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					
		18- 29	30- 39	40- 49	50- 62	63+	
22. "While doing other things"							
Male	9.3%	23	13	5	13	8	62
Female	22.2%	110	42	32	34	18	236
26. "Even if not watching, like set on for companionship"							
Male	5.4%	13	5	4	6	8	36
Female	15.7%	72	35	21	23	16	167
18. "Get more done when set is on"							
Male	4.2%	11	4	1	4	8	28
Female	9.3%	36	27	14	17	5	99

fifteen to twenty-two percent of women. Four percent of men and nine percent of women claim they "get more done" when the set is on (Var. 18). This use of television as radio, as it is sometimes called, occurs most particularly among the youngest age group, and is reported by twice as many women as men.

The use of television as a means of physical ESCAPE is also "definitely" disagreed with by more than fifty percent of adults. However, television is used to "get away" from family for five or six percent of adults. Another fifteen percent of

Table 51

Crosstabulation of Variables Defining ESCAPE Factor

By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
34. "Get away from rest of family"							
Male	6.0%	17	8	7	2	6	40
Female	5.1%	27	8	8	3	7	54
30. "To put off doing other things"							
Male	15.3%	43	19	17	10	13	102
Female	14.9%	84	27	20	17	10	158
36. "When visit friends, often watch television"							
Male	10.7%	33	13	6	4	15	71
Female	9.0%	46	6	13	16	14	95
40. "Like to imagine myself taking part"							
Male	9.0%	28	10	7	5	10	60
Female	9.0%	37	15	14	18	12	96

virtually equivalent percentages for men and women use it to avoid "doing other things" (Var. 30). About ten percent of adults frequently watch television when visiting friends (Var. 36). In addition, nine percent of men and women like to imagine themselves taking part in the programs (Var. 40). In this sense, television is being used as a temporary escape from their real lives.

Almost thirty percent of men and thirty-five percent of women use television as assistance when they are bored (Var. 4); the same percentage use TV out of habit (Var. 3), perhaps to keep from being bored. This use is very much stronger among the youngest age group.

Table 52

Crosstabulation of Variables Defining BOREDOM Factor

By Age and Sex

N of Males = 666

N of Females = 1,061

Variables	Percentage Of Sex	Age					Total
		18- 29	30- 39	40- 49	50- 62	63+	
4. "Helps when I'm bored"							
Male	30.0%	81	34	22	35	28	200
Female	40.2%	188	75	51	72	41	427
3. "It's a habit"							
Male	26.4%	57	35	24	39	21	176
Female	29.8%	133	68	36	50	29	316

The crosstabulations of the variables defining the factors show several differences between men and women and among age groups. These differences clarify the relation of sex and age to the use factors.

Multiple Discriminant Analyses of Uses Factors
and Demographic Indicators

In this section multiple discriminant analysis is used to identify functions which relate to demographic groupings. The purpose of discriminant analysis is to statistically distinguish between two or more groups. Linear combinations of variables called "functions" are formed maximizing the separation of the groups. The size of the loadings on the functions identifies which variables contribute most to differentiation between the groups.⁸⁹ When the standardized beta weights for each variable composing each function are multiplied by the raw scores for each individual and summed, the group centroid is calculated.⁹⁰ The size of a group centroid indicates the magnitude and direction of the relationship between it and the variables important to the function; and the absolute differences between the group centroids define the separation between the individual groups.

For this analysis, factor scores were calculated for each individual case for each of the twelve uses of television

⁸⁹Nie, et al., Statistical Package for the Social Sciences, pp. 435-436. See also Cooley and Lohnes, pp. 243-250.

⁹⁰SPSS., p. 443.

factors previously described. The regression method of calculating the factor scores was employed. Discriminant analyses were run between the uses factor scores and the demographic indicators of age, sex, income, education, consumption, and children. Standardized group centroids for the demographic subgroups were calculated. Analyses were performed using the Statistical Package for the Social Sciences. Loadings down to half the largest loading were interpreted; centroids above .30 were interpreted. In the case of mixed loadings, only the highest loading was utilized.⁹¹ All analyses contained one or more discriminant functions significant at the .01 level. The functions are described and the centroids related to them. These analyses convey the patterns of uses of television made by the subgroups.

Age

The factor scores for the uses of television factors, AROUSAL, PLEASURE, INFORMATION, COMPANY, NOT USING TELEVISION, SOCIAL SUBSTITUTE, DISTRACTION, MODELING, PASS TIME, BACKGROUND NOISE, ESCAPE, and BOREDOM, were analyzed by means of

⁹¹The statistical power of this study is so high as to encourage the detection of essentially trivial results; statistical significance occurs readily with a very large sample. See Chase and Tucker, "Statistical Power: Derivation, Development, and Data-analytic Implications," The Psychological Record (1976): 473-486, for a discussion of this issue. As a consequence of this phenomenon, statistical significance becomes the precondition of the results described in this study. In the case of the centroids in the discriminant analyses, a conservative minimum level for interpretation was established at .30.

multiple discriminant analysis, and centroids for the following age groupings were calculated: 18-29, 30-39, 40-49, 50-62, and 63+ years. Three discriminant functions were significant, but only two are interpreted due to the lack of discriminating power of the centroids on the third function (see Figure 1).

The first function consists of factor scores for SOCIAL SUBSTITUTE (.47), INFORMATION (.39), NOT USING TELEVISION (-.35), and BOREDOM (-.36) as high loading variables (see Figure 1). The 63+ age group is most different from the other groups on these dimensions having a centroid of .97. This suggests that this oldest age group uses television as a para-social substitute, for information, and watches more than the other age groups, but does not use it because they're bored. The youngest age group, 18-29 years, also relates to this combination of uses of television viewing; their centroid is -.56, which means that the very young differ markedly from all other age groups in that they definitely do not use television as a social substitute or for information, refuse to watch television, but do use to remedy boredom. The age group of 50-62 years also uses television in a manner similar to that of the oldest age group, but not as strongly; their centroid is .48.

A second function is evidently related to age; this function is composed of factors scores for the ESCAPE factor (-.61) and the PASS TIME factor (-.31). In this function, the

Figure 1
Age Group Centroids and
Discriminate Functions 1 and 2

Standardized Discriminant Function Coefficients

Function 1		Function 2	
SOCIAL SUBSTITUTE	.47	ESCAPE	-.61
INFORMATION	.39	PASS TIME	-.31
NOT USING TELEVISION	-.35		
BOREDOM	-.36		

Centroids of Groups

18-29	-.56	-.16
30-39	-.23	.16
40-49	.01	.11
50-62	.48	.25
63+	.97	-.36

oldest age group, 63+, relates moderately in positive fashion to the use of television for escaping and for passing time; the centroid for the 63+ group is $-.36$. The remainder of the age groups have only weak relationships with these variables and do not differ much from one another. The centroids for both functions appear in Figure 1. Overall, the functions predict only 40.3 percent of cases; this is based on classifying the original cases to determine what percentages are correctly classified by the use factors.

Sex

The factor scores for the uses of television factors were submitted to discriminant analysis, and centroids for sex were calculated (see Figure 2). One function was possible and was significant, consisting of factor scores for BACKGROUND NOISE ($.55$), COMPANY ($.51$), and DISTRACTION ($-.31$). The centroid for males was $-.45$ which means that there is a moderate, negative relationship between the BACKGROUND NOISE use of television and men, a moderate, negative relationship between COMPANY and men, and weaker, positive relationship with the DISTRACTION use. One can conclude that men do not use television for background noise or for company, but do use it, a little, for distraction. The centroid for women is nearly at the level for interpretation ($.29$). It indicates an opposite relationship to that of men; women show a weak tendency to use television for background noise, for company, but not for distraction. The centroids for sex are plotted

in Figure 2; they show a great difference between the sexes with regard to the function. On the average, the function predicts 63.7 percent of cases.

Figure 2

Sex Group Centroids and
Discriminant Function 1

* (males)						* (females)					
-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	
Standardized Discriminant Function Coefficients											
Function 1											
BACKGROUND NOISE						.55					
COMPANY						.51					
DISTRACTION						-.31					
Centroids of Groups											
Males						-.45					
Females						.29					

Income

The factor scores for the uses of television factors were submitted to discriminant analysis, and centroids for income were calculated (see Figure 3). One function was significant consisting of factor scores for SOCIAL SUBSTITUTE (-.49), COMPANY (-.148), MODELING (-.39), and ESCAPE (-.25). The centroid for the lowest income group, under \$5,000, was -.77; this indicates there is a strong positive relation between people with very low income and all the factors in this function.

Figure 3
Income Group Centroids and
Discriminant Function 1

<hr/>									
(Under \$5,000)*	(\$5-10,*000)*				(\$10-*20,000) (Over \$20,000)				
<hr/>									
-8	-6	-4	-2	0	+2	+4	+6	+8	
<hr/>									
Standardized Discriminant Function Coefficients									
Function 1									
SOCIAL SUBSTITUTE -.49									
COMPANY -.48									
MODELING -.39									
ESCAPE -.25									
Centroids of Groups									
Under \$5,000 -.77									
\$5,000-\$10,000 -.21									
\$10,000-\$20,000 .10									
Over \$20,000 .38									

In other words, people with very low incomes use television for a social substitute, for company, for modeling, and for escape. In contrast, people with high incomes, over \$20,000, generally do not use television for any of these things; the centroid for the high income group was .38. The two intervening groups do not have much relationship with the function although the lower group, between \$5,000 and \$10,000, does have a positive relationship to the factors, but only very weakly; the centroid is -.21. The centroids for income are plotted in Figure 3; they show a very great difference between

the low income group and all others, and between the high income group and the two lower income groups. The predictive power of the function is 35.1 percent.

Education

In this analysis the factor scores for the uses of television were submitted to discriminant analysis and centroids for education levels calculated (see Figure 4). One discriminant function was significant. It consists of the SOCIAL SUBSTITUTE (-.65) and COMPANY (-.45) factors. There is a very strong positive relationship between the lowest educational group, elementary school only, and these two factors. The centroid for this group was -.75. This means that people with a very low level of education have a very strong tendency to use television as a social substitute and for company. Two other groups, those with the higher educational levels, four year college or graduate schooling, have a strong relationship in the opposite manner with the factors of SOCIAL SUBSTITUTE and COMPANY. The centroids for these groups are .43 and .51. The centroid for two year college or technical school graduates is .26, a weak relationship, but also positive. The more education one has, the less likely one is to use television as a social substitute or for company. The centroids for education are plotted in Figure 4, and show an extreme difference between those with very little education and those with a large amount. The predictive ability of the function is only 23.2 percent.

Figure 4

Education Group Centroids and
Discriminant Function 1

Figure 5
Consumption Group Centroids and
Discriminant Functions 1 and 2

rarely watch television definitely do not use television for pleasure or for background noise or as a social substitute when

they do have it turned on. The group which watches less than two hours per day of television has a similar relationship with these factors; the centroid is .53, suggesting this group of people also tends not to use television for pleasure, for background noise, or as a social substitute. As might be anticipated, the group that admits to watching for more than four hours per day, the highest amount of viewing on the questionnaire, holds an opposing position: this group does use television for pleasure, background noise, and as a social substitute. The centroid for more than four hours viewing is $-.54$. The remaining group has virtually no relationship with the function.

This analysis has a second discriminant function that is significant. It consists of AROUSAL ($-.51$), INFORMATION ($.46$), and ESCAPE ($-.29$). The group that rarely watches television shows a moderate, positive relationship to the use of television for arousal and escape but a negative relationship to the use of it for information; the centroid is $-.40$. The other groups show virtually no relationship to this function. Centroids for both the functions are plotted in Figure 5; the predictive power of the function is 40.8 percent. They show that the group that rarely watches television is the most different from all the others, but that the high consumer is also quite different from moderate consumers.

Children

The factor scores for the uses of television were submitted to discriminant analysis with centroids calculated for those who have-children-under-eighteen-living-at-home and those who do not-have-children-under-eighteen-living-at-home (see Figure 6). One function was possible and was significant. The functions consist of the factors for NOT USING TELEVISION (-.51), for COMPANY (.51), for BOREDOM (-.35), for SOCIAL SUBSTITUTE (.33), and for INFORMATION (.27). The centroid for no-children was .29 which relates in a weak way to the function. It suggests that not having children means one does watch television, one does use it for company, as a social substitute,

Figure 6

Children Group Centroids and Discriminant Function

*					* (No children)		
(Children under 18)							
-3	-2	-1	0	+1	+2	+3	

Standardized Discriminant Function Coefficients

Function 1

NOT USING TELEVISION	-.51
COMPANY	.51
BOREDOM	-.35
SOCIAL SUBSTITUTE	.33
INFORMATION	.27

Centroids of Groups

Have children under 18	-.27
No children under 18	.29

and for information, but not as an antidote to boredom. The other group, those having children under eighteen, relates in a weak ($-.27$) but opposite way to these factors. People with children do not watch much television, and when they do, it is not for company, as a social substitute, or for information, but is used when they are bored. The centroids for children are plotted in Figure 6, and show a moderate difference between the groups. The predictive power of children is 61.5 percent.

These discriminant analyses show that separate demographic groups demonstrate great differences when related to uses of television. This is particularly true of the older age group in relation to the other age groups; males and females; low and high income; low and high education; and low and high consumption. Although having or not having children differentiates with regard to uses of television, the difference is not as great as those between the other groups. The television use factors developed in this study demonstrated their ability to discriminate between demographic groups and provide additional descriptors of the television audience.

Multiple Discriminant Analyses of Uses Factors and Television Program Titles

The purpose of the analysis in this section was to discover which uses of television are clearly related to particular television programs. If certain programs are associated with certain uses, then the audience for those programs can be

more clearly defined. This would be a practical application for the study of television uses of benefit to programmers, advertisers, and copy writers.

To accomplish this, factor scores for eleven uses of television were submitted to discriminant analysis, and the standardized centroids for those watching a particular program and those not watching it were calculated. The following program titles were utilized in this study: "Mike Douglas"; "Good Morning America"; "Tonight Show"; Network Evening News: ABC, CBS, NBC; "CBS Reports"; "ABC News Specials"; "National Geographic Specials"; "Geraldo Rivera's Thursday Night Special"; "Wide World of Sports"; "Mary Hartman, Mary Hartman"; "Dinah"; "Wonder Woman"; "Emergency"; "Six Million Dollar Man"; "Busting Loose"; "The Jacksons"; "Tony Randall Show"; "Happy Days"; "Executive Suite"; "Carol Burnett Show"; "The Gong Show."

The subject had the option of responding "never," "occasionally," or "regularly" watched to the program title on the questionnaire. Only the never/regularly responses were utilized in this analysis, since occasional viewers dilute the centroids and made discrimination unclear. All analyses contained one discriminant function significant at the .01 level.⁹² The high centroids are interpreted in relation to the high

⁹²The program "Lanigan's Rabbi" appeared on the questionnaire, but did not produce a significant discriminant function and is not included in this section. The sample of viewers of that program was only 18.

loadings on the function; loadings were interpreted from the highest down to half the highest. Centroids were interpreted above .30, and the sign of the centroids in relation to the sign of the function loading determined whether there was a positive or negative relationship.⁹³ Centroids that are very different from each other reflect a strong difference between the groups, in this case, viewers and non-viewers of a particular program. The functions are not plotted since twenty-four single function tables would contribute little to understanding.

"Mike Douglas"

The factor scores for eleven uses of television factors were analyzed, and the centroids for those who regularly watch the "Mike Douglas Show" and those who never watch it were calculated (see Table 53). The centroid for those regularly watching "Mike Douglas" is .94 showing a strong relationship between the viewers and the variables. The discriminant function consists of BACKGROUND NOISE (.57), SOCIAL SUBSTITUTE (.44), PLEASURE (.36), and MODELING (.29). This means that regular viewers of this program made definite use of television for background noise, and as a social substitute, along with use of television simply for pleasure and modeling. The centroid for non-viewers is too low to be interpreted

⁹³Positive plus positive equals a positive relationship; positive plus negative equals a negative relationship; and negative plus negative equals a positive relationship.

Table 53

Uses of Television by Viewers of Specific Programs

Programs	Centroids		Function Loadings on Use Factors											
	Viewers	Non-Viewers	AROUSAL	PLEASURE	INFORMATION	COMPANY	NOT USING TV	SOC. SUBST.	DISTRACTION	MODELING	PASS TIME	BKG. NOISE	ESCAPE	BOREDOM
Mike Douglas	.94	-.06		.36				.44		.29		.57		
Good Morning America	.72	-.03								.38		.67		
Tonight Show	.39	-.10		.62	.31		.32					.44		
ABC News	.31	-.33			.75								-.39	
CBS News	.23	-.51			.78								-.39	
NBS News	.32	-.29			.65								-.48	
CBS Reports	.40	-.46			.72								-.42	
ABC News Specials	.37	-.51			.80								-.49	

($-.06$), but is very different from that of viewers. The predictive power of the discriminant function is 75.1 percent. The sample of viewers is 61; the sample of non-viewers is 867.

"Good Morning America"

The centroid for regular viewers is .72, suggesting a moderately strong relationship between viewers and the variables. The function for this program consists of two variables: BACKGROUND NOISE (.67) and MODELING (.38). This means that viewers largely use television for the background noise it provides, but also use it for role modeling. The centroid for non-viewers is below the interpretation level ($-.03$), but is very different from that of viewers. The predictive ability of the function is 70.1 percent based on an N of 52 viewers and 1,325 non-viewers.

"Tonight Show"

Regular viewers of Johnny Carson have a centroid of .39, and four variables make up the discriminant function for this program. They are PLEASURE (.62), BACKGROUND NOISE (.44), NOT USING TELEVISION (.32), and INFORMATION (.31). This shows a moderate relationship between using television for pleasure, and as background noise, and to being non-viewers of television, and to using television for information. This suggests that some people who watch the "Tonight Show" may not watch any other television on a regular basis, and consequently,

identify with being non-viewers. The non-viewer of Johnny Carson does not relate at the level of interpretability to this function (-.10). The function predicts at a rate of 62.7 percent. The N of viewers is 183 and non-viewers, 683.

Network News: ABC, CBS, NBC

The discriminant functions for all three network news programs are very similar; they consist only of INFORMATION and ESCAPE uses of television; the viewer uses television for information, as expected, and does not use it for escape. The non-viewer of network news reverses the uses. For the "ABC News," the centroid for viewers is .31 and for non-viewers -.33; and the loading for INFORMATION is .75 and for ESCAPE is -.39. These centroids are nearly below the usual threshold of interpretation, but are important for their similarity with those of the other networks, and for the definite differences they show between viewers and non-viewers. The ABC sample of viewers is 391, and of non-viewers, 369. The predictive ability of the function is 62.5 percent.

The centroid for viewers of the "CBS Evening News" is only .23 and for non-viewers is -.51. INFORMATION loaded at .78 and ESCAPE at -.39. This means that the uses of television for non-viewers can be assumed with moderate strength, but that viewers relate only weakly to the function. These viewers and non-viewers are very different from each other, and show a greater difference between themselves than between

their ABC and NBC counterparts. The sample for viewers of CBS is 570, for non-viewers, 265. The percent of prediction is 65.4 percent.

For viewers of NBC's evening news, the centroid for viewers is .32 and for non-viewers, -.29. The function has loadings of .65 for INFORMATION and -.48 for ESCAPE. The latter is below the minimum established for interpretation, but does follow the pattern evident for watchers of the other network news programs. The sample for NBC is 387 viewers and 421 non-viewers. The predictive ability of the function is 64.4 percent, very close to the level of the other programs.

"CBS Reports"

The analysis of "CBS Reports" yielded only expected results, similar to those for network news programs. The centroid for non-viewers of the programs relates moderately to the variables (-.46). Regular viewers of the program relate slightly less strongly to the variables (.40), but in a reversed way, and the two groups differ greatly from each other. The discriminant functions consist of INFORMATION (.72) and ESCAPE (-.42). Non-viewers do not use television for information and do use it for escape, whereas viewers use television for information but not for escape. The predictive ability of the function is 69.1 percent. The sample of viewers is 388, and the sample of non-viewers is 343.

"ABC News Specials"

The discriminant function for this analysis consists of the same variables as for "CBS Reports," INFORMATION (.80) and ESCAPE (-.49), and the loadings are similar. Non-viewers relate moderately (-.51) to the function: they do not use television for information and, though less strongly, do use it for escape. Regular viewers of the program relate even less powerfully to the function (.37), although in a reversed manner, but are greatly different from non-viewers. The predictive ability of this function is 69.5 percent. The N of viewers is 404, of non-viewers, 288.

"National Geographic Specials"

The centroid for viewers of the program is .52. This analysis shows a discriminant function consisting of three variables: INFORMATION (.59), ESCAPE (-.36), and NOT USING TELEVISION (-.31) (see Table 54). This suggests that these viewers use television for information, but not for escape. Viewers also regularly watch television. The centroid for non-viewers is opposite in sign but, too small for interpretation (-.26). The predictive ability of the function is 65.8 percent, based on an N of 312 viewers and 635 non-viewers.

"Geraldo Rivera's Thursday Night Special"

The centroid for regular viewers of Rivera's Special is -.80. The discriminant function for this analysis is made up

Table 54

Uses of Television by Viewers of Specific Programs

Programs	Centroids		Function Loadings on Use Factors											
	Viewers	Non-Viewers	AROUSAL	PLEASURE	INFORMATION	COMPANY	NOT USING TV	SOC. SUBST.	DISTRACTION	MODELING	PASS TIME	BKG. NOISE	ESCAPE	BOREDOM
Nat. Geographic Specials	.52	-.26			.59		-.32						-.36	
Geraldo Rivera	-.80	.03							-.41			-.71		
Wide World of Sports	.15	-.28	.45	.31			.35	-.42	.26	-.35				.29
Mary Hartman, Mary Hartman	-.63	.03										-.61	-.51	
Dinah	-1.00	.06		-.32	-.38	-.32		-.46				-.45		
Wonder Woman	-.66	.09	-.38	-.41				-.29	-.32				-.50	
Emergency	-.38	.42		-.60					-.34					
Six Million Dollar Man	-.49	.27	-.40	-.50	.35				-.34					-.32

of the factors of BACKGROUND NOISE (-.71) and DISTRACTION (-.41). This means that viewers relate strongly to the use of television for background noise and for distraction from problems. The centroid for non-viewers is minute (.03), which indicates a very strong difference between viewers and non-viewers. The predictive power of the function is 69.9 percent. The N of viewers is 48, of non-viewers, 1,445.

"Wide World of Sports"

The centroid for viewers of this program is too low for interpretation (.15) in relation to the function as is the centroid for non-viewers (-.28). The function for this program is not distinct; it consists of eight variables: AROUSAL (.45), SOCIAL SUBSTITUTE (-.42), NOT USING TELEVISION (.35), MODELING (-.35), PLEASURE (.31), BOREDOM (.29), DISTRACTION (.26), and BACKGROUND NOISE (-.24). It is clear that viewers and non-viewers tend to use television in opposite ways: viewers have an extremely weak tendency toward the use of television for arousal, pleasure, boredom, and distraction, and against use of it as a social substitute, for modeling, or for background noise; they belong to the group who claims not to watch television in general. The non-viewers shows the contrary predispositions. The predictive ability of the function is 61.6 percent, based on an N of 563 viewers and 301 non-viewers. This analysis should be taken only as faintly suggestive due to the small centroids of the groups despite the very large sample.

"Mary Hartman, Mary Hartman"

The centroid for viewers is $-.63$, suggesting a reasonably strong relationship between the centroid and the function. The analysis of this program shows a discriminant function composed of two variables: BACKGROUND NOISE ($-.61$) and ESCAPE ($-.51$). This suggests that viewers of Mary Hartman use television as background noise and for physical escape from people. The centroid for non-viewers is too low to interpret in relation to the function, but is notably different from that of viewers ($.03$). The function predicts 66.0 percent of the time. The results are based on a sample of 69 viewers and 1,322 non-viewers.

"Dinah"

The centroid for viewers who watch "Dinah" regularly is a very high -1.00 . Five variables comprise the discriminant function for this program: SOCIAL SUBSTITUTE ($-.46$), BACKGROUND NOISE ($-.44$), INFORMATION ($-.38$), PLEASURE ($-.32$), and COMPANY ($-.32$). This means that "Dinah" watchers strongly use television as a social substitute, as background noise, for information, and less robustly, for pleasure and for company. The non-viewer group does not relate to the function but is very greatly different from the viewer group. The power of prediction for the function is 74.0 percent. The sample of "Dinah" viewers is 60, and of non-viewers, 1,016.

"Wonder Woman"

The centroid for watchers of the program shows a moderately strong relationship ($-.66$) to the function which is uniformly positive. The discriminant function for this program consists of five variables: ESCAPE ($-.50$), PLEASURE ($-.41$), AROUSAL ($-.38$), DISTRACTION ($-.32$), and SOCIAL SUBSTITUTE ($-.29$). This means that people who watch "Wonder Woman" use television for escape, for pleasure, for arousal, for distraction, and less strongly, as a social substitute. Non-viewers do not relate to this function, but are very different from viewers ($.09$). The predictive ability of this function is 67.4 percent. The sample of viewers is 141, of non-viewers, 1,029.

"Emergency"

The centroids for both viewers and non-viewers of the program are interpretable: the centroid for viewers is $-.38$ and for non-viewers is $.42$. The discriminant function for "Emergency" consists of two variables: PLEASURE ($-.60$) and DISTRACTION ($-.34$). This suggests that viewers relate moderately in a positive way toward the use of television for simple pleasure and distraction. Non-viewers relate in opposite fashion, not using television for pleasure or for distraction. Viewers and non-viewers of "Emergency" are very different from each other. The predictive ability of the function is 69.2 percent. The sample of viewers is 428 and of non-viewers, 383.

"Six Million Dollar Man"

The centroid for viewers of "Six Million Dollar Man" relates moderately to the function (-.49). The analysis yielded a function composed of PLEASURE (-.50), AROUSAL (-.40), INFORMATION (.35), DISTRACTION (-.34), and BOREDOM (-.32). This suggests that viewers use television for pleasure, arousal, distraction, and boredom, but do not use it for information. Non-viewers are below the level determined for interpretation (.27), but are quite different from viewers, and their sign is reversed so they relate negatively toward the uses made of "Six Million Dollar Man" by viewers. The predictive power of the function is 67.2 percent. The N of viewers is 342, and of non-viewers, 612.

"Busting Loose"

The standardized centroid for viewers of "Busting Loose" is a very high 1.24. The discriminant function for this program consists of three variables: BACKGROUND NOISE (.67), DISTRACTION (.42), and BOREDOM (.37) (see Table 55). This means that watchers of the program have an extremely strong relationship to using television for background noise. This may explain why the program had such low ratings and was recently canceled by its network; few persons actually watched the show. The viewer also relates strongly to using television for a distraction and to remove boredom. The non-viewer's centroid is too low for interpretation, but is notably different from that of viewers (-.04). The predictive

Table 55

Uses of Television By Viewers of Specific Programs

Programs	Centroids		Function Loadings on Use Factors											
	Viewers	Non-Viewers	AROUSAL	PLEASURE	INFORMATION	COMPANY	NOT USING TV	SOC. SUBST.	DISTRACTION	MODELING	PASS TIME	BKG. NOISE	ESCAPE	BOREDOM
Busting Loose	1.24	-.04							.42			.67		.37
The Jacksons'	-.66	.09			-.33	-.34		-.40			-.45	-.28		
Tony Randall	.42	-.07		.37					.50	.34	.47	.32		
Happy Days	-.34	.51	-.28	-.40			-.26					-.43	-.30	-.36
Executive Suite	-.87	.06		-.36								-.64		
Carol Burnett	-.41	.18			-.70			-.45						
The Gong Show	-.83	.10		-.43				-.38			-.27	-.37	-.37	-.23

power of the function is 74.9 percent. The N of viewers is 40, of non-viewers, 1,404.

"The Jacksons"

The centroid for regular viewers of "The Jacksons" is $\bar{x} = .66$. The discriminant function for this analysis consists of five variables: MODELING (-.45), SOCIAL SUBSTITUTE (-.40), COMPANY (-.34), INFORMATION (-.33), and BACKGROUND NOISE (-.28). This indicates that these viewers rather definitely use television for modeling and as a social substitute, and make a more moderate use for company and information, with somewhat less use for background noise. The non-viewer of "The Jacksons" does not relate to this function, and is definitely different from viewers (.09). It is appropriate to recall that the Black proportion of the sample is less than two percent, so these results are based on white responses. The predictive ability of the function is 69.4 percent. The N of viewers is 133 and of non-viewers, 1,021.

"Tony Randall Show"

The size of the centroid for viewers of the program suggests a moderate relationship to the function (.42). Five variables comprise the discriminant function for this program: DISTRACTION (.50), PASS TIME (.47), PLEASURE (.37), MODELING (.34), and BACKGROUND NOISE (.32). Regular viewers of the "Tony Randall Show" may be said to use television to forget problems, to pass the time, for simple pleasure, and more

moderately, for role models and as background noise. There is no relationship between non-viewers of the "Tony Randall Show" and the function (-.07). The ability of the function to predict is 63.4 percent. The sample of viewers is 159, of non-viewers 898.

"Happy Days"

The centroid for watchers of "Happy Days" is -.34. The discriminant function for "Happy Days" consists of six variables: BACKGROUND NOISE (-.43), PLEASURE (-.40), BOREDOM (-.36), ESCAPE (-.30), AROUSAL (-.28), and NOT USING TELEVISION (-.26). This suggests, somewhat weakly, that viewers of the program use television for background noise, for pleasure, to remove boredom, for escape, and for arousal; they do not claim to be non-viewers. The centroid for people who never watch "Happy Days" suggests a moderately strong relationship with the variables in the function (.51). They are people who say they do not watch television and, consequently, do not have specific functions for it. The two groups of viewers and non-viewers are distinctly different. The predictive ability of this function is 67.8 percent, based on a sample of 569 viewers and 382 non-viewers.

"Executive Suite"

The centroid for viewers is a strong -.87. BACKGROUND NOISE (-.64) and PLEASURE (-.36) combine to form one discriminant function for viewers of "Executive Suite." The best

interpretation of the relationship between the centroid and the function is that viewers of the program definitely use television for noise in the background of their lives. They also use television for simple enjoyment. Non-viewers of this program have a centroid too small to be interpreted (.06), but are greatly different from viewers. The percent of correct classification, the predictive ability of the function is 71.9 percent. The N of viewers is 88, of non-viewers is 1,248.

"Carol Burnett Show"

The regular viewer of Carol Burnett relates moderately to certain uses of television, indicated by a centroid of -.41. The discriminant function for the uses of television factors consists of two variables which are INFORMATION (-.70) and SOCIAL SUBSTITUTE (-.45). The viewers use television for both information and as a social substitute. The non-viewer does not relate to these variables (.18). The predictive ability of this function is 63.7 percent. The sample of viewers is 250, of non-viewers, 552.

"The Gong Show"

The centroid for viewers of this program shows a strong relationship with the function (-.83). The analysis of this program evinces a function comprised of five variables: PLEASURE (-.43), SOCIAL SUBSTITUTE (-.38), ESCAPE (-.37), BACKGROUND NOISE (-.37), PASS TIME (-.27), and BOREDOM (-.23).

This means that viewers use television for pleasure, as a social substitute, as an escape, for background noise, to pass the time, and to get rid of boredom. The centroid for non-viewers is below the level of interpretability (.10), but shows a great difference from that of viewers. The predictive power of the function is 70.5 percent. The sample of cases in this analysis is 118 viewers and 1,001 non-viewers.

The kinds of uses of television suggested by the individual analyses of viewers and non-viewers of programs were assembled in Tables 53-55 to make more evident patterns of uses. As might be expected, two action adventure programs make use of television for AROUSAL, although so does "Happy Days," and possibly "Wide World of Sports," but only weakly. A variety of programs are used for simple PLEASURE. In the case of the INFORMATION use, the anticipated news and documentary programs appear, but it is interesting to note that programs like "Dinah," "Carol Burnett Show," and "The Jacksons'" show marked use of television for INFORMATION, whereas "Emergency's" practical information on the work of firefighters and rescue squads does not associate with this use. Television for COMPANY is seen only in connection with "Dinah" and "The Jacksons'." The SOCIAL SUBSTITUTE use appears in connection with several programs: "Mike Douglas," "Dinah," "The Jacksons'," "The Carol Burnett Show," "The Gong Show," and, less expectedly, "Wonder Woman." The DISTRACTION

use appears frequently, but the MODELING use only for four programs: two talk shows and two situation-comedies. The PASS TIME use is even less prevalent and occurs only in connection with "The Jacksons'," "Tony Randall Show" and "The Gong Show." The use of television for BACKGROUND NOISE is pervasive among the programs selected. ESCAPE appears as a positive use in only four disparate cases, and BOREDOM appears in connection with five varied programs.

The group of program titles in this study was determined by arbitrary selection of a combination of prime-time and late afternoon programs available in Fremont during one week in February of 1977. The purpose of inclusion of the programs was to demonstrate the value of television use factors in describing the audience of these programs. In virtually every instance, there is a strong difference demonstrated between viewers of a program and non-viewers.

The difference between viewers and non-viewers of "Mike Douglas," "Dinah," "Busting Loose," "Executive Suite," and "The Gong Show" is extreme (a .90 or greater difference between centroids). The spread between viewers and non-viewers of the following programs (from .70 to .89) indicates a great difference between the groups: "Emergency," "CBS Reports," "ABC News Specials," "Happy Days," "Good Morning America," "CBS News," "National Geographic Specials," "Geraldo Rivera," "Wonder Woman," "Six Million Dollar Man," and "The Jacksons'." Between six additional programs there is at least some

definite difference shown by the spread between viewers and non-viewers (from .58 to .69): "ABC News," "Mary Hartman," "NBC News," and the "Carol Burnett Show." The final programs to be mentioned are "Tonight Show," "Tony Randall Show," and "Wide World of Sports"; their centroids have only a spread of .49-.43 and neither centroid for "Wide World of Sports" lies above the .30 minimum level for interpretation. These results suggest that the viewers of "Wide World of Sports" are extremely heterogeneous, whereas viewers and non-viewers of other programs form separate homogeneous groups. It follows that there ought to be methods of identifying the elements that make these groups (either viewers or non-viewers) homogeneous, and that study of the uses made of television is one means to this end. These findings demonstrate that the use factors developed in this study heuristically differentiate between television audience members.

Many of these uses made by viewers of specific programs have immediate face validity which is not supported by research evidence. Other uses that were less well anticipated in the literature can provide stimulus for writers. In addition, television programs frequently lose their regular audience because of imperceptible shifts in program content or style; many of the uses differentiated here can clarify for producers what the audience's desires are. An analysis of the uses made of a specific program can isolate those characteristics unique in the relationship between audience

and program, and between viewers of a program and those who do not watch.

Factor Analyses of Life Styles

Multiple methods of rotations and numbers of factors rotated were utilized for analysis of the questionnaire items relating to consumer life styles in a method parallel to the handling of the uses of television viewing items. Principal axis factor analysis was performed on Likert-type responses to Var. 42-75 and x1-150 of the questionnaire, using both varimax and oblique rotations of ten to twenty factors. Rotation 15 was chosen as representative of the higher rotations because the factor structure over multiple rotations clearly suggests that fourteen factors is the optimum for interpretation. Rotation 15 contains the maximum number of interpretable factors with no intervening uninterpretable factors. Variable loadings over .30 were utilized with a minimum of three variables per factor excepting the SPORTS factor on this rotation which contains two variables. In cases of mixed loadings over .30, the variable was included only in the factor in which the highest loading occurred. A random sub-sample of 400 subjects was factor analyzed to provide cross-validation. Table 56 depicts the factor structure in all the analyses.

Results of Rotation 15 of Life Styles Factor Analyses

In this instance fifteen factors were rotated using varimax rotations, and all factors except the final one interpreted. The total amount of variance accounted for was 97.7 percent. Factor I is LEADER, which relates to the well-known "opinion leader" of diffusion research; it accounts for 20.0 percent of the variance; Factor II is MOVER, accounting for 16.7 percent; Factor III is READER, accounting for 11.7 percent; Factor IV is CASH BUYER, which appears in positive form in other rotations as the CREDIT BUYER, accounting for 7.4 percent of the variance in Rotation 15; Factor V is EXPERIMENTAL SHOPPER, accounting for 6.8 percent; Factor VI is PARENT, accounting for 5.8 percent; Factor VII is SAFE SHOPPER, accounting for 5.0 percent; Factor VIII is SWINGER, accounting for 4.6 percent; Factor IX is DEBTOR, accounting for 4.3 percent; Factor X is RURAL, accounting for 4.0 percent; Factor XI is BARGAIN SHOPPER, accounting for 3.1 percent; Factor XII is BRAND NAME SHOPPER, accounting for 2.9 percent; Factor XIII is SPORTS, accounting for 2.7 percent; and Factor XIV is MESSY HOUSEKEEPER, which appears as NEAT HOUSEKEEPER in other rotations, and which accounts for 2.7 percent of the variance in Rotation 15. Only 2.3 percent of the total common variance is unaccounted for in this rotation. All the factors over X (ten) appear in at least one rotation in a position under X (ten) and, consequently, account for a greater proportion of the variance in that rotation (see Table 56).

Table 56

Factor Structure of Multiple Rotations of Life Style Variables

Number Of Factors Rotated	LEADER	MOVER	READER	CHARGE BUYER	CASH BUYER	EXPERIMENTAL SHOPPER	PARENT	SAFE SHOPPER	SWINGER	DEBTOR	RURAL	BARGAIN SHOPPER	BRAND NAME SHOPPER	SPORTS	MESSY HOUSEKEEPER	NEAT HOUSEKEEPER	Percent Of Variance Accounted For*
10	I	IX	III	VI	V			VIII	VII						IV		95.5
12	I	II	III	VII	V	IV		X	VIII						IX		97.0
13	I	II	III		VI	V	IV	VII	VIII		X	XII	XI		IX		97.2
14	I	IX	III	IV	V	XI		X	VIII		XII	VII	VI	XIII	II		97.3
15	I	II	III		IV	V	VI	VII	VIII	IX	X	XI	XII	XIII	XIV		97.7
16	I	II	III		IV	V	IV	VII	XV	VIII	X	XII	XI	XIII		IX	95.6
18	I	II	III	IV		V	VI	VII	XV	VIII	X	XVI	XI	XIII		XV	92.1
20	I	II	III		IV	V	XIV	XVII	VII	VIII		XVI	VI	XIII	IX		89.0
Random 15		VII (-I)	III	IV		II	IX			XIV	V	(-XIII)	XII		VIII	X	97.1
Pilot 15	I	V	IV	II	X					III				VIII	IX	III	
Oblique 15	I	-X	IX		V	-VI	-XII	-VIII	-II		XI	-XIII	VII	XIV	IV		97.7

*Percent of variance reported for fourteen factors or the number of factors minus one for rotations under Rotation 14.

LEADER

The first factor in all rotations except the random sub-sample consists of six variables comprising the LEADER factor. This life style resembles the opinion leader commonly found in diffusion of innovations research; he dispenses information and advice and has a strongly positive self-image (see Table 57). The only exception to this pattern occurs in the random sub-sample where the LEADER appeared as Factor VII with three of the variables, Var. x15, x6 and x36, loading above .30 from the other rotations. LEADER accounts for approximately twenty percent of the variance in all rotations.

Table 57

Life Styles Factor Analysis: Rotation 15

Factor I: LEADER

Variables	Percent of Variance Accounted for: 20.0%	Loadings
x15. I like to be considered a leader		.64
x6. I think I have a lot of personal ability		.57
74. I think I have more self-confidence than most people		.56
x32. My friends or neighbors often come to me for advice		.51
x9. People come to me more often than I go to them for information about brands		.42
x31. I have never been really outstanding at anything		-.35

MOVER

The second factor in Rotation 15 and the majority of other rotations consists of two pairs of salient variables

called MOVER which regularly appear in other rotations. The first pair of variables refers to how often the family has moved in the past and how often they expect to move in the future. The other pair of variables refers to the family income and expectations for increased future income and the need to borrow money in the recent past (see Table 58).

Table 58

Life Styles Factor Analysis: Rotation 15

Factor II: MOVER

Variables	Percent of Variance Accounted For: 16.7%	Loadings
53. We will probably move at least once in the next five years.		.58
56. Five years from now the family income will probably be a lot higher than it is now.		.42
51. In the last ten years we have lived in at least three different cities.		.39
61. In the past year we have borrowed money from a bank or a finance company.		.35
x33. I like television news programs.		-.31

One item that has a low loading in this rotation but recurs in other rotations is Var. x33, in which the respondent disagrees with the statement, "I like television news programs." In other rotations a variable shows that the person with the MOVER life style does not read the daily paper. This suggests the MOVER acquires his national news from interpersonal sources rather than mass media. MOVER accounts for 16.7 percent of the variance in this rotation.

READER

Factor III was difficult to assign an appropriate one-word name, although, it has appeared previously in the literature as "elite." The person the variables describe likes art galleries, classical music and community projects; he likes reading and finds magazines more interesting than television, and in fact, disagrees that television is his primary source of entertainment (see Table 59). His pattern is remarkably similar to that of the public television viewer. Since this study is concerned primarily with television viewing, this life style was named READER to focus on this distinguishing characteristic.

Table 59

Life Style Factor Analysis: Rotation 15

Factor III: READER

Variables	Percent of Variance Accounted For: 11.7%	Loadings
63. I enjoy going through an art gallery		.58
x39. I like to read		.50
x3. Magazines are more interesting than television		.46
54. Classical music is more interesting than popular music		.44
x34. I like to work on community projects		.36
69. Television is our primary source of entertainment		-.31

CASH BUYER

Factor IV is half of a pair of factors that refer to one overriding construct: what form of credit one uses, cash

or charge cards. The loadings for the variables in Factor IV describe the CASH BUYER (see Table 60). This party does not often use a charge card or credit card; he likes to pay cash, disapproves of charge accounts and the general use of credit except for exceptional purchases. These variables appeared as a single factor in Rotations 13, 15, 16 and 20. In the alternate rotations, 10, 12, 14 and 18, the same variables appear with reverse signs, positive appearing where negative appears in this rotation, for example. In those rotations the life style is named CHARGE BUYER, but it is clearly the other half of an umbrella concept. The two forms of the construct tend to appear as the fourth factor in the various rotations. In Rotation 15, CASH BUYER accounts for 7.4 percent of the variance.

Table 60

Life Styles Factor Analysis: Rotation 15

Factor IV: CASH BUYER

Variables	Percent of Variance Accounted For: 7.4%	Loadings
45. I buy many things with a credit card or charge card		-.64
64. I like to pay cash for everything I buy		.61
72. It is good to have charge accounts		-.55
x7. To buy anything, other than a house or a car, on credit is unwise		.47

EXPERIMENTAL SHOPPER

The fifth factor in virtually all rotations is called EXPERIMENTAL SHOPPER (see Table 56). In Rotation 15 it is comprised of five variables; four refer to a propensity for trying new products, and the fifth refers to being definitely influenced by advertising. This person may relate to the "innovator" demonstrated in diffusion research. Factor V accounts for 6.8 percent of the variance and appears in Table 61. This factor is the first of four to be described which refer directly to types of shoppers; the others are the SAFE SHOPPER, the BARGAIN SHOPPER, and the BRAND-NAME SHOPPER. Two other types of shoppers were suggested in the pilot study and Rotation 12: the QUALITY SHOPPER and the BRAND-LOYAL SHOPPER, but they are not reported here since they did not replicate in other rotations. However, future research in this area may benefit by the inclusion of additional items to make these distinctions clear.

Table 61

Life Styles Factor Analysis: Rotation 15

Factor V: EXPERIMENTAL SHOPPER

Variables	Percent of Variance Accounted For: 6.8%	Loadings
60. I often try new brands before my friends and neighbors do		.62
65. When I see a new brand on the shelf, I often buy it just to see what it's like		.59
58. When I find a new brand I like, I usually tell my friends about it		.43
x21. I like to try new and different things		.36
44. My choice of brands for many products is influenced by advertising		.34

PARENT

The sixth factor is composed of three variables in Rotation 15; two of the variables refer to the importance of children; the third variable supports the importance of spiritual values over material things (see Table 62). In several rotations an additional variable appears: "On a job, security is more important than money." The factor was named PARENT to take account of a life style in which children and their needs, spiritual values and job security have importance. This factor uses 5.8 percent of the variance in Rotation 15, and occurs most frequently as Factor IV or VI but also shifts to Factor XI and XIV in other rotations (see Table 56).

Table 62
Life Style Factor Analysis: Rotation 15
Factor VI: PARENT

Variables	Percent of Variance Accounted For: 5.8%	Loadings
x27. When making important family decisions, consideration of the children should come first		.53
70. My children are the most important thing in my life		.46
x37. Spiritual values are more important than material things		.38

SAFE SHOPPER

Factor VII is called the SAFE SHOPPER. It comprises three variables that show a conservative attitude toward new products and a dependence on interpersonal sources of information rather than mass media (see Table 63). A variable occasionally loading with this factor is item 41: "Before going shopping, I sit down and prepare a complete shopping list"; this practice is consistent with a non-experimental attitude toward new products and strange brands. The factor appears generally in the VII position, but also shifts to the VIII, X and XVII positions (see Table 56). It appears in the factor structure of most other rotations along with EXPERIMENTAL SHOPPER; from which one concludes that SAFE and EXPERIMENTAL are not true opposites employing reversal of meaning on the same items. The major distinction is that the SAFE SHOPPER is more dependent upon information from friends,

while the EXPERIMENTAL SHOPPER is stimulated by advertising. In Rotation 15, the SAFE SHOPPER accounts for 5.0 percent of the variance.

Table 63

Life Style Factor Analysis: Rotation 15

Factor VII: SAFE SHOPPER

Variables	Percent of Variance Accounted For: 5.0%	Loadings
42. Information I get about a product from a friend is better than what I get from advertising		.48
48. I like to wait and see how other people like new brands before I try them		.47
43. I spend a lot of time talking with my friends about products and brands		.45

SWINGER

The eighth factor is the SWINGER, a name given to reflect the outgoing, social character of responses to this set of variables. A large number of variables consistently load in this factor, and the factor generally occupies the VIII position in the factor structure (see Table 56), accounting for approximately 4.6 percent of the variance. The factor consists of a positive attitude toward going out and parties, a modern attitude toward "swinging," and a mild concern for dressing fashionably (see Table 64).

Table 64
Life Style Factor Analysis: Rotation 15
Factor VIII: SWINGER

Variables	Percent of Variance Accounted For: 4.6%	Loadings
x19. I would rather spend a quiet evening at home than go out to a party		.56
67. I like parties where there is lots of music and talk		.54
x25. I like to think I am a bit of a swinger		.47
75. I have somewhat old-fashioned tastes and habits		-.40
x45. I do more things socially than do most of my friends		.39
x28. I stay home most evenings		-.38
x1. An important part of my life and activities is dressing smartly		.35

DEBTOR

Factor IX is the DEBTOR in Rotation 15. It is composed of three variables, two of which show a worried attitude toward having enough money now and in the future. The third variable shows that the respondent regrets many life choices (see Table 65). The factor appears only in the fifteenth and subsequent rotations; in the smaller rotations, the variables mixed into other factors or did not load over .30. DEBTOR appears most frequently as Factor VIII (see Table 56), and it accounts for 4.3 percent of the variance in Rotation 15 as Factor IX.

Table 65
Life Style Factor Analysis: Rotation 15
Factor IX: DEBTOR

Variables	Percent of Variance Accounted For: 4.3%	Loadings
x41. No matter how fast our income goes up, we never seem to get ahead.		.56
x47. Our family is too heavily in debt today.		.47
x40. If I had my life to live over, I would sure do things differently.		.41

RURAL

The tenth factor to appear in Rotation 15 is the RURAL factor, so named because it seems to encompass a proscriptive attitude toward physical exercise, a love of the out-of-doors and a loyal attitude toward brand names (see Table 66). In other rotations, other variables occurring in this factor show a preference for the country over the city, for houses over apartments, and a mild resistance to unknown brands and convenience foods. Another attitude demonstrated is the belief there is too much advertising on television. The RURAL factor appears clearly in Rotations 13 to 18, usually as the tenth factor. A negative version of the factor appeared in the random sub-sample with minus loadings. In Rotation 15, RURAL accounts for 4.0 percent of the variance.

Table 66

Life Styles Factor Analysis: Rotation 15

Factor X: RURAL

Variables	Percent of Variance Accounted For: 4.0%	Loadings
x22. Everyone should take walks, bicycle, garden or otherwise exercise several times a week		.41
x10. I love the fresh air and out of doors		.33
x42. Once I find a brand I like, I stick with it		.32

BARGAIN SHOPPER

Factor XI is the BARGAIN SHOPPER in Rotation 15, but this factor moves freely from position VII to positions XI, XII, and XVI in alternate rotations (see Table 56). It consists of four variables describing a liking for bargain-hunting, and buying the lowest priced items, for going to sales, and for grocery shopping (see Table 67). The factor accounts for only 3.1 percent of the variance in this rotation but for over five percent in Rotation 14. The factor consistently appears in every rotation after 12.

Table 67

Life Styles Factor Analysis: Rotation 15

Factor XI: BARGAIN SHOPPER

Variables	Percent of Variance Accounted For: 3.1%	Loadings
x16. A person can save a lot of money by shopping around for bargains		.46
x18. I usually watch the advertisements for announcements of sales		.44
50. I usually look for the lowest possible prices when I shop		.36
x23. I like to go grocery shopping		.33

BRAND-NAME SHOPPER

The twelfth factor in the exemplary Rotation is the BRAND-NAME SHOPPER. This factor appears more often as the sixth or eleventh factor in other rotations, where the amount of variance accounted for increase (see Table 56). BRAND-NAME SHOPPER accounts for 2.9 percent of the variance in Rotation 15. The factor consists of three variables showing a preference for national brands over local brands and a mild reluctance to purchase unknown brands (see Table 68).

Table 68

Life Style Factor Analysis: Rotation 15

Factor XII: BRAND-NAME SHOPPER

Variables	Percent of Variance Accounted for: 2.9%	Loadings
x35. Nationally advertised brands are usually worth a few pennies more than a store's own brand.		.52
59. A store's own brand is usually just as good as a nationally advertised brand.		-.42
x14. I keep away from brands I have never heard of.		.30

SPORTS

Factor XIII, SPORTS, is interpreted in this study because it rigidly replicates in the XIII position in all rotations over 14 except the pilot study where it occurred as IX (see Table 56). It is comprised of two variables referring to enjoyment of conversations about sports and participation in sports (see Table 69). No other variables relating to active sports appeared in the questionnaire, so it was not possible to obtain a clearer picture of the factor's composition. SPORTS accounted for 2.7 percent of the variance in Rotation 15.

Table 69

Life Style Factor Analysis: Rotation 15

Factor XIII: SPORTS

Variables	Percent of Variance Accounted For: 2.7%	Loadings
68. I thoroughly enjoy conversations about sports		.52
66. I bowl, play tennis, golf or other active sports quite often		.48

MESSY HOUSEKEEPER

The final factor interpreted in Rotation 15 is MESSY HOUSEKEEPER. This factor is one of a pair of opposites comparable to CASH/CREDIT BUYER; the alter ego of the MESSY is the NEAT HOUSEKEEPER. The latter appears in Rotations 14, 16, and 18, while the MESSY HOUSEKEEPER appears in Rotations 10, 12, 13, 15 and 20. The position of the factor in the structure is most commonly IX (see Table 56). The identical variables load in each form of the factor with opposing signs. In Rotation 15, the MESSY HOUSEKEEPER disagrees that he keeps his home neat and clean, dislikes household chores and does them lightly, takes short cuts in cooking, and does not take a great deal of pride in his home (see Table 70). Factor XIV accounts for 2.7 percent of the variance in Rotation 15, but larger amounts when it occurs earlier in the factor structure.

Table 70

Life Style Factor Analysis: Rotation 15

Factor XIV: MESSY HOUSEKEEPER

Variables	Percent of Variance Accounted For: 2.7%	Loadings
x44. I usually keep where I live very neat and clean		-.54
46. My idea of housekeeping is "once over lightly"		.47
49. I am the kind of person who takes short cuts in cooking		.42
x13. I must admit I really don't like household chores		.40
x26. I take a great deal of pride in my home		-.41

The fifteenth factor was not interpreted because it contains only residual variance. The rotation of fifteen factors was reported since in the sixteenth, eighteenth and twentieth rotations, one or more factors below the last one were uninterpretable due to a lack of sufficient loadings above .30 or a lack of replication. The purpose of this factor analysis was not to obtain all the imaginable life style types (factors), but to obtain a clear set of consumer descriptors to be utilized in addition to demographics to modify understanding of the uses of television viewing.

Random Subsample Validation

A random subsample of twenty-five percent of the total sample (400 cases) was selected by means of the Statistical Package for the Social Sciences and factor analyzed for

cross-validation of results. Fifteen factors were rotated in varimax rotation, and a minimum of three variables loading above .30 was used to define a factor.

The factor structure of Rotation 15 of the full sample did not perfectly replicate in the random subsample. Out of the fourteen factors appearing in the primary analysis, twelve occurred in the subsample. However, several of those factors shifted position in the factor structure, including LEADER, EXPERIMENTAL SHOPPER, and SPORTS whose positions had been inflexible in other rotations. Two factors, SAFE SHOPPER and BRAND-NAME SHOPPER, did not appear. The sixth and eleventh factors did not appear in previous rotations and were consequently not interpreted. The first factor in the random subsample is a negative version of the MOVER which accounts for 19.0 percent of the variance; the signs on items referring to moving in the past or future, reading of newspapers and preference for television news programs is reversed from those in the primary study. Factor II is the EXPERIMENTAL SHOPPER, accounting for 16.7 percent of the variance. Factor III is the READER who thinks television should have more serious programs; this factor accounts for 9.8 percent of the variance. Factor IV is CHARGE BUYER, accounting for 6.9 percent of the variance. Factor V is the DEBTOR, accounting for 6.8 percent of the variance. The sixth factor is not clear; that combination of variables did not appear in any of the rotations of the full sample. Factor VII is

the LEADER who normally occupies the first position; in this subsample, LEADER accounts for only 5.3 percent of the variance. Factor VIII is SPORTS, and Factor IX is PARENT, accounting for 4.9 percent and 4.4 percent of the variance, respectively. Factor X is the MESSY HOUSEKEEPER, accounting for 4.1 percent. The eleventh factor was not interpreted since it does not correspond to any factor found in the full sample rotations. Factor XII is the BARGAIN SHOPPER, accounting for 3.4 percent of the variance in this analysis. Factor XIII is the negative version of RURAL, the signs being reversed on the same items that appear in the main analysis; one might call this an "urban" factor. This factor accounted for 3.3 percent of the variance. The final factor is SWINGER, appearing in the Factor XIV position, and accounting for 3.0 percent of the variance. Although there are some minor differences, the factor composition of the main analysis of all subjects replicates substantially in the subsample, providing cross-validation of results.

An additional weighted factor analysis was made in which the full sample of 1,795 cases was corrected to match the national distribution of sex. All fourteen factors emerged with only minor changes in the factor structure. For example, SWINGER appeared as the first factor, accounting for 20.2 percent of the variance, and NEAT HOUSEKEEPER appeared instead of MESSY HOUSEKEEPER. These results provide further substantiation for the analysis of Rotation 15 of the consumer

life styles, and indicate that robust dimensions have been located.

Canonical Correlation Analysis of Use Factors

And Life Style Factors

The final statistical analysis in this study relates the use factors to the consumer life style factors. The purpose of the analysis was to determine the nature of the relationship which exists between the uses made of television and particular life styles. The life styles were those obtained in the factor analysis of consumer life styles in the preceding section, and the uses were the factors obtained at the beginning of the chapter. A canonical correlation analysis demonstrates that there are a variety of such relationships between these two sets of variables. This information has practical benefits for advertisers, manufacturers and television programmers, and makes a contribution to the body of empirical evidence on the characteristics of the television audience. More specific conclusions of a practical nature will be drawn in Chapter V.

Canonical correlation utilizes maximum correlations between linear functions of two sets of variables to display the structure of relationships across domains of measurement. In this study the domains of measurement are factor scores for the twelve use factors and fourteen life style factors, calculated by the regression method. Two weighted linear composites (variates) and two sets of beta (regression)

weights are simultaneously derived from the two sets of variables. Canonical component loadings are formed by correlating each variable's raw score with its weighted linear composite (variate).⁹⁴ More than one maximally correlated linear function, which is uncorrelated with previous functions, may be possible. Each set of beta weights, canonical component loadings and the product-moment correlation between the variates (R_c) is called a root.

Two programs for calculation were used, Multivariate and SPSS,⁹⁵ to check the reliability of the beta weights.⁹⁶ The .01 level of significance was adopted for statistical procedures, but due to the very large sample, the statistical power was sufficiently great that all canonical correlations had significance beyond the .0001 level. The traditional recommendation of .30 or greater for interpretation of canonical correlation coefficients was adopted for the first four

⁹⁴For a clear discussion of the terminology and procedures of canonical correlation, see: William W. Cooley and Paul R. Lohnes, Multivariate Data Analysis (New York: John Wiley & Sons, 1971), pp. 168-192; Richard B. Haynes, "An Exploratory Multivariate Field Study: An Investigation of Television Consumption, Overt Behavior, and Demographic Characteristics as Related to the Child Viewer;" (Doctoral dissertation, Bowling Green State University, 1975), pp. 67-76, and Roger D. Wimmer, "A Multivariate Analysis of the Use and Effects of the Mass Media in the 1968 Presidential Election" (Doctoral dissertation, Bowling Green State University, 1976), pp. 63-73.

⁹⁵J. Finn, Multivariate: Univariate and Multivariate Analysis of Variance, Covariance, and Regression, Version V (New York: The University of Buffalo Press, 1972), and N. Nie, et al., Statistical Package for the Social Sciences, 1975.

⁹⁶David J. Weiss, "Canonical Correlation Analysis in Counseling Psychology Research," Journal of Counseling Psychology 19:3 (1972): 248.

roots.⁹⁷ Canonical component loadings were utilized for interpretation in preference to beta weights because of their superior reliability.⁹⁸ All component loadings are reported in the tables (71-75), but only salient loadings of $\pm .35$ or higher are discussed in the text. This limit was used because the higher loadings are of greater importance, and the discussion of all relationships between variables would prove prohibitively lengthy.

Another statistic recently developed for measuring the overlap between two sets of variables in a canonical correlation is the index of redundancy.⁹⁹ This measure is recommended to determine the degree to which one set of variables predicts the other. The concept of redundancy refers to the amount of predictable or common variance (overlap) between the two sets. In the hypotheses for this study, no overlap was assumed between the consumer life styles and the use factors, and a lack of redundancy anticipated. Consequently, the small percentages given for the index of redundancy in the tables are appropriate and confirm that the two sets of factors measure different characteristics which have little in common.

⁹⁷Cooley and Lohnes, p. 176.

⁹⁸R. Barcikowski and J. Stevens, "A Monte Carlo Study of the Stability of Canonical Correlations, Canonical Weights and Canonical Variate-Variable Correlations," Multivariate Behavioral Research (July, 1975): 353-364.

⁹⁹Cooley and Lohnes, pp. 170-176.

The first canonical root ($R_c = .66$) accounts for 43.6 percent of the variance in common between the canonical variates (see Table 71). The root shows a moderately strong relationship of the use factors in Set 1 of ESCAPE (.49), AROUSAL (.44), DISTRACTION (.43) and PLEASURE (.37), with the life style factors in Set 2 of EXPERIMENTAL SHOPPER (.48), READER (-.46), DEBTOR (.43) and BARGAIN SHOPPER (.40). This suggests that people who try a lot of new products, have a lot of debts, and look for bargains, use television to get away from people and problems (ESCAPE and DISTRACTION) and to get enjoyment and stimulation (PLEASURE and AROUSAL). It seems possible that while the EXPERIMENTAL SHOPPER, the DEBTOR and the BARGAIN SHOPPER select television programming for escape, arousal, pleasure and distraction, they may be particularly vulnerable to advertising appeals of new products and sales on certain programs. Those programs that provide escape, arousal, pleasure and distraction are likely to be viewed by those people who unconsciously seek new products and bargains. In contrast, the READER is not likely to use television for escape, arousal, distraction or pleasure.

The second canonical root ($R_c = .55$) accounts for 30.1 percent of the variance in common between the canonical variates (see Table 72). The root shows a strong relationship between an element of the use factors, INFORMATION (.67), and the life style factor, MOVER (-.71). This confirms a finding in another part of the study that the MOVER does not watch

Table 71
CANONICAL COMPONENT LOADINGS FOR FIRST CANONICAL ROOT:
USE FACTORS AND LIFE STYLE FACTORS

Root 1		
Set 1: Uses of Television	Loadings	Set 2: Consumer Life Styles
AROUSAL	.44* .03	LEADER
PLEASURE	.37* .22	MOVER
INFORMATION	.27 -.46*	READER
COMPANY	.28 .05	CASH BUYER
NOT USING TV	.30 .48*	EXPERIMENTAL SHOPPER
SOCIAL SUBSTITUTE	.35 .25	PARENT
DISTRACTION	.43* .21	SAFE SHOPPER
MODELING	.34 .09	SWINGER
PASS TIME	.26 .43*	DEBTOR
BACKGROUND NOISE	.31 -.14	RURAL
ESCAPE	.49* .40*	BARGAIN SHOPPER
BOREDOM	.7 .32	BRAND NAME SHOPPER
	.08	SPORTS
	.33	MESSY HOUSEKEEPER

Canonical Correlation: .66

Percent of Variance in Common Between Variates: 43.6%

Redundancy for Uses Given Life Styles: 5.1%

Redundancy for Life Styles Given Uses: 3.9%

*Salient loadings for interpretation

Table 72

CANONICAL COMPONENT LOADINGS FOR SECOND CANONICAL ROOT:

USE FACTORS AND LIFE STYLE FACTORS

Root 2

Set 1: Uses of Television	Loadings		Set 2: Consumer Life Styles
AROUSAL	-.09	-.03	LEADER
PLEASURE	.19	-.71*	MOVER
INFORMATION	.67*	.05	READER
COMPANY	.28	.04	CASH BUYER
NOT USING TV	-.39*	.17	EXPERIMENTAL SHOPPER
SOCIAL SUBSTITUTE	.37*	.38*	PARENT
DISTRACTION	-.20	.08	SAFE SHOPPER
MODELING	.17	-.36*	SWINGER
PASS TIME	-.24	-.15	DEBTOR
BACKGROUND NOISE	-.06	.16	RURAL
ESCAPE	-.33	.38*	BARGAIN SHOPPER
BOREDOM	-.26	.24	BRAND NAME SHOPPER
		-.19	SPORTS
		-.35*	MESSY HOUSEKEEPER

Canonical Correlation: .55

Percent of Variance in Common Between Variates: 30.1%

Redundancy for Uses Given Life Styles: 2.9%

Redundancy for Life Styles Given Uses: 2.7%

*Salient loadings for interpretation.

television news and does not make use of television in general for information. Several other elements have moderate loadings in this root: NOT USING TELEVISION (-.39) and SOCIAL SUBSTITUTE (.37) in Set 1, and PARENT (.38), BARGAIN SHOPPER (.38), SWINGER (-.36), and MESSY HOUSEKEEPER (-.35). These loadings suggest that the MOVER does watch television but does not use it for information or as a social substitute. In contrast, the PARENT and the BARGAIN SHOPPER do not pay much attention to television, but do make some use of it for information, and it does function as a substitute for social contacts for them. However, the SWINGER and the MESSY HOUSEKEEPER do not use television for information or as a social substitute, although they do watch some television and make some use of it for ESCAPE (loading = -.33).

Table 73 depicts the third canonical root relating uses of television and consumer life styles ($R_c = .35$). This root accounts for 12.3 percent of the variance in common between the canonical variates. In Set 1, the strongest loading is for use of television as a SOCIAL SUBSTITUTE (.70); more moderate loadings occur for INFORMATION (-.51) and PASS TIME (.38). In Set 2, there are three comparably sized loadings for RURAL (-.45), EXPERIMENTAL SHOPPER (-.44) and READER (-.43). These loadings suggest that people who are RURAL, EXPERIMENTAL SHOPPERS, and READERS make use of television for information, but do not use it as a social substitute or to pass time.

Table 73

CANONICAL COMPONENT LOADINGS FOR THIRD CANONICAL ROOT:

USE FACTORS AND LIFE STYLE FACTORS

Root 3

Set 1: Uses of Television	Loadings		Set 2: Consumer Life Styles
AROUSAL	-.18	-.29	LEADER
PLEASURE	-.04	-.29	MOVER
INFORMATION	-.51*	-.43*	READER
COMPANY	.14	.25	CASH BUYER
NOT USING TV	-.17	-.44*	EXPERIMENTAL SHOPPER
SOCIAL SUBSTITUTE	.70*	-.15	PARENT
DISTRACTION	-.01	-.21	SAFE SHOPPER
MODELING	-.01	-.28	SWINGER
PASS TIME	.38*	.27	DEBTOR
BACKGROUND NOISE	-.13	-.45*	RURAL
ESCAPE	-.03	-.30	BARGAIN SHOPPER
BOREDOM	-.09	.14	BRAND NAME SHOPPER
		-.05	SPORTS
		.07	MESSY HOUSEKEEPER

Canonical Correlation: .35

Percent of Variance in Common Between Variates: 12.3%

Redundancy for Uses Given Life Styles: 1.0%

Redundancy for Life Styles Given Uses: 1.0%

*Salient loadings for interpretation.

The fourth canonical root appears in Table 74 ($R_c = .32$), and the variance in common between variates is 10.4 percent. The highest loading for Set 1 is PLEASURE (-.81) with a more moderate loading for MODELING (.48). Set 2 has loadings for READER (.59), RURAL (-.53) and SAFE SHOPPER (.49). Taken together, these loadings suggest that the reader and the safe shopper definitely do not use television for pleasure, but do make moderate use of it for modeling. In contrast, the rural person definitely does use television for pleasure, but not for modeling.

Table 75 is included for its suggestive value only since the canonical correlation coefficients fall below the recommended value of .30 for all three roots. This means that the roots may represent essentially residual variance (error) rather than meaningful variance. However, the roots were significant at the .0001 level, and the salient loadings imply some interesting relationships that may have value for future research.

There appears to be a negative relationship in Root 5 between leaders and people liking sports and use of television for companionship or background noise; leaders and sport-activists show use of television for distraction from problems. At the same time, the swinger (the person who likes parties and going out) does use television for companionship and for background noise, but not for distraction from problems.

Table 74

CANONICAL COMPONENT LOADINGS FOR FOURTH CANONICAL ROOT:

USE FACTORS AND LIFE STYLE FACTORS

Root 4

Set 1: Uses of Television	Loadings		Set 2: Consumer Life Styles
AROUSAL	.03	.17	LEADER
PLEASURE	-.81*	-.06	MOVER
INFORMATION	.20	.59*	READER
COMPANY	-.03	.03	CASH BUYER
NOT USING TV	.02	.03	EXPERIMENTAL SHOPPER
SOCIAL SUBSTITUTE	.04	.02	PARENT
DISTRACTION	-.08	.49*	SAFE SHOPPER
MODELING	.48*	.06	SWINGER
PASS TIME	.17	.17	DEBTOR
BACKGROUND NOISE	.17	-.53*	RURAL
ESCAPE	.17	-.05	BARGAIN SHOPPER
BOREDOM	-.19	.20	BRAND NAME SHOPPER
		-.04	SPORTS
		.09	MESSY HOUSEKEEPER

Canonical Correlation: .32

Percent of Variance in Common Between Variates: 10.4%

Redundancy for Uses Given Life Styles: .9%

Redundancy for Life Styles Given Uses: .7%

*Salient loadings for interpretation.

Table 75

RESIDUAL CANONICAL COMPONENT LOADINGS FOR FIFTH, SIXTH,
AND SEVENTH CANONICAL ROOTS: SUGGESTIONS FOR
RELATIONSHIPS BETWEEN USE FACTORS AND LIFE STYLE FACTORS

Root 5			
Set 1: Uses of Television	Salient Loadings Only		Set 2: Consumer Life Styles
COMPANY	.48	-.46	LEADER
DISTRACTION	-.44	.39	SWINGER
BACKGROUND NOISE	.57	-.59	SPORTS
Canonical Correlation:	.27	Percent of Variance Between Variates: 7.1%	

Root 6			
AROUSAL	.58	.46	LEADER
COMPANY	-.39	-.47	RURAL
NOT USING TV	-.38	-.52	MESSY HOUSEKEEPER
MODELING	.45		
Canonical Correlation:	.24	Percent of Variance Between Variates: 5.8%	

Root 7			
NOT USING TV	-.58	-.58	DEBTOR
SOCIAL SUBSTITUTE	-.38		
PASS TIME	.51		
Canonical Correlation:	.15	Percent of Variance Between Variates: 2.2%	

In Root 6 it appears that leaders use television for arousal and for modeling, but do not use it for company; this root suggests confirmation for the view that leaders are consumers of television. The messy housekeeper and the rural person, on the other hand, do not use television for arousal or for modeling, but do use it for company, when they watch at all, since the positive relationship with NOT USING TELEVISION means that frequently their sets are turned on without viewers paying any attention.

The suggestion to be drawn from Root 7 is that television functions as a social substitute for people who have money problems. When they pay any attention at all, it does not serve to pass the time for them. Any conclusions based on Table 75 have a weak foundation due to the small size of canonical correlations and should be taken as only suggestive for further research. However, the first four roots in this canonical correlation analysis demonstrate many elements of the relationship between the use factors and consumer life styles. They suggest that some programs are more suitable for the placement of advertisements for certain products than others because viewing predispositions differ according to the life style of the viewer. These viewing predispositions can be heuristically described in terms of the uses made of television.

CHAPTER V

DISCUSSION

Summary

The literature of mass communication contains a quantity of empirical research into the comparative functions of newspapers, radio and television, but relatively little is known of the totality of functions served by the single medium of television. Authors frequently refer to the use of television as escape, but many meanings are subsumed under that term. Other discussions refer to the classic four media functions of socialization, surveillance, correlation and entertainment. To these recent researchers have now added uses such as background noise, companionship and emotional arousal. In addition, other researchers have pointed to the use of television as a substitute for social interaction and as a behavior model. This study utilized a survey of nearly eighteen hundred adults to empirically determine what adults say are the functions of television viewing in their lives. The portion of the questionnaire relating to uses made of television was based in large measure on a study of British school children by Greenberg in 1965, with additions from the work of Foley and others.

In order to determine the relationship between the television audience and the uses made of viewing, a life style questionnaire was employed in the study. Adapted from a

version made available by Tigert, it consisted of attitude, interest and opinion statements on consumer preferences and behavior, and was administered simultaneously with the uses of television questionnaire. Although widely utilized by advertising agencies, most of the research in the area of life styles has been proprietary and is not available as a portion of the data base of mass communication literature.

Two pilot studies testing the application of portions of the instrument and the surveying method were conducted in 1975 and 1976. The uses and life style portions of the questionnaire were slightly modified for the major study by changing the language of some statements to more adult forms and reducing the total number of life style items.

This study employed a two hundred-fifty item, Likert-style questionnaire with a six degree response scale from "definitely disagree" to "definitely agree." The primary purpose of the study was to elicit the structure of uses adults make of television and relate consumer life styles to them. In addition to the visual demographic items on sex, age, income, education, number of children, and consumption, the titles of twenty-four selected evening television programs were included to observe the way in which factors describing the functions of television would relate to individual program viewing.

The data was analyzed using three multivariate procedures: factor analysis, multiple discriminant analysis, and canonical correlation analysis. The statements on the uses of television

were factor analyzed separately from the statements relating to consumer life styles. Crosstabulation of the variables making up the use factors with age and sex demonstrated the demographic character of the respondents who strongly agreed with the statements. Demographic indicators and television program titles were used to discriminate between use factors. Finally, factor scores for the use factors and for the life style factors were canonically correlated.

Based on the pilot studies and the review of the literature, the hypotheses for this study were that the following eleven factors pertaining to uses of television would appear: information, modeling, background noise, social substitute, passing time (negative), passing time (positive), habit, pleasure, distraction, arousal, and conversation. Additionally, it was hypothesized that twelve consumer life style factors would emerge and that there would be some relationship between the use factors and life style factors. Supplemental heuristic value was anticipated for the use factors as they related to specific television programs. The value of this study lies in its contribution to a theoretical understanding of the audience of the television medium and what mediates its effects, and to practical applications for the television advertiser and programmer.

A stratified random sample of 1,795 subjects from the city of Fremont, Ohio was utilized in this study. Approximately two thousand, two hundred questionnaires were

distributed door-to-door around randomly selected city blocks, and 1,795 usable questionnaires were collected and coded. The surveyors left the questionnaires with each adult who agreed to fill one out with additional copies for other adults who might participate. At least two efforts were made to retrieve the completed questionnaires, and in the case of minority participants, three or more efforts were made. No compensation was employed, and the response rate from Black and Spanish-surname minorities was poor.

The total sample broke down into 666 men and 1,061 women, a forty/sixty ratio. The percentage of subjects in the 18-49 age group was 65.8 percent, which corresponds closely to the 63.0 percent of national distribution in that age group. Demographics for education were equally close to national statistics with 69 percent of the sample having an elementary or high school education which compares with 69.9 percent nationally. The sample is deficient in low income respondents with only 30.8 percent having total family income under ten thousand dollars when the national figure is about forty percent. Approximately half the sample said they had children under the age of eighteen living at home which corresponds to national statistics.

Racial distribution was strongly skewed with 96.8 percent of the respondents being white. Reporting of the amount of television consumed each day was somewhat lower than Nielsen figures. The generalizability of the results is limited to

whites of low-middle to higher income since the sample is somewhat deficient in low income respondents and particularly deficient in minority group members.

Forty-two statements generally beginning "I watch television because..." were factor analyzed in a varimax rotation of thirteen factors using the principal factors method; squared multiple correlations were utilized as communality estimates. In order to determine the maximum number of factors to be interpreted, the correlation matrix was rotated fifteen times (eleven orthogonal, four oblique) using rotations of from five to eighteen factors, and each set of results was separately analyzed and interpreted. A minimum of two variables loading above .30 was required to define a factor. Although individual factors shifted position in the factor structure, twelve factors consistently replicated. In each rotation, the final factor was discounted as a residual factor; consequently, the rotation of thirteen factors resulted in the twelve interpretable factors. A random subsample of four hundred subjects and the full sample weighted by sex were also factor analyzed providing cross-validation of results. The primary conclusion to be drawn from the consistency with which the factors replicated is that these twelve factors are reliable indicators of the major functions of television viewing. This type of analysis provides some of the history lacking in the empirical literature in the field.

Twelve factors accounted for 98.7 percent of the common variance. Factor I is AROUSAL, accounting for 53.4 percent

of the variance, and consisting of statements such as "It excites me" (.76), and "It thrills me" (.57), with additional loadings of .47, .46, and .31.

Factor II is PLEASURE, accounting for 10.7 percent of the variance, and is made up of items such as "I just enjoy watching" (.80) and other similar statements with loadings of .74 and .36.

Factor III is INFORMATION and refers to learning about the world, frequently called the "news function" of television; it accounts for 7.4 percent of the variance, and consists of statements like "Television programs give me new insights into our complex world" (.70), and other loadings of .56 and .54.

Factor IV is COMPANY in this rotation; it accounts for 6.6 percent of the variance, and is made up of sentiments such as "It makes me feel less lonely" (.66) and other loadings of .61 and .54.

Factor V is NOT USING TELEVISION and refers to sporadic viewing of television; it accounts for 4.6 percent of the variance, and consists of "I often have the television set turned on without really watching it" (.80), and "I often forget that the TV set is turned on" (.54).

Factor VI is SOCIAL SUBSTITUTE, referring to use of television as a substitute for human interaction as in Horton and Wohl's "para-social interaction." It accounts for 3.2 percent of the variance in this rotation, but a greater amount in other rotations. Statements such as "Having a television

is like having a friend when you need company" (.53), and "Watching television is as good as talking to friends" (.60), and other similar variables loading .62 and .30 formed the factor.

Factor VII is DISTRACTION, accounting for 3.1 percent of the rotation, and it refers to the use of television to forget about problems and tensions. It consists of items like "I can forget about work" (.6), and other loadings of .56, .54, .48 and .44.

Factor VIII is MODELING which was hypothesized as "Learn About Self" in Greenberg's study of children. It accounts for 2.7 percent of the variance, and is made up of items such as "It shows me how I'm supposed to act" (.55) and other loadings of .64, .52, .43 and .43. However, the crosstabulation of this variable with age and sex showed that over sixty-five percent of the sample "definitely disagreed with this use of television, implying that behavior depicted on television is too extreme for many people.

Factor IX is PASS TIME. It accounts for 2.2 percent of the variance and consists of two variables: "I have nothing better to do" (.61) and "It gives me something to do" (.44). These variables separated in Greenberg's study of children but consistently appeared as a single factor in this study.

Factor X is BACKGROUND NOISE in this rotation, accounting for 2.0 percent of the variance. In some rotations, however,

BACKGROUND NOISE appeared as first, second, or third factor and accounted for as much as fifty percent of the variance. Consequently, it is inappropriate to dismiss this factor as unimportant despite the small amount of variance it accounts for in this rotation. Its meaning derives from statements such as "I like to have the set turned on while I am doing other things" (.74), and "I find I can get more done when the TV set is on" (.65), and another similar variable loading of .60.

Factor XI is ESCAPE although this factor often occurs as Factor VII. It accounts for 1.5 percent of the variance and refers to physical removal from family and environment when watching television. It consists of statements such as "I can get away from the rest of the family" (.41) and "When I watch television, I like to imagine myself taking part in the program" (.41), plus two variables loading .36 and .33.

Factor XII is BOREDOM, accounting for 1.4 percent of the variance and consisting of "It helps me when I'm bored," (.51) and "It's a habit" (.40). The residual variance is 1.3 percent.

The factor analysis of consumer life styles was best interpreted in a rotation of fifteen factors, the final factor being discounted and fourteen interpreted. The correlation matrix for eighty-five items was analyzed using principal factors in ten analyses using varimax and oblique rotations of from ten to twenty factors. A random subsample of four

hundred subjects supported the primary analyses.

Factor I is LEADER, accounting for 20.0 percent of the variance, and consisting of statements such as "I like to be considered as leader" (.64), and "My friends and neighbors often come to me for advice" (.51), and similar variables loading .57, .56, .42, and -.35.

Factor II is MOVER, accounting for 16.7 percent of the variance, and consisting of "We will probably move at least once in the next five years" (.58), and "Five years from now the family income will probably be a lot higher than it is now" (.42), as well as similar variables relating to mobility and income with loadings of .39 and .35, and one interesting item suggesting that people who move a lot do not like television news programs (.31).

Factor III is READER who is often named "elite" or "intellectual" in life style studies. This factor accounts for 11.7 percent of the variance, and is made up of variables such as "I enjoy going through an art gallery" (.58) and "I like to read" (.50). There are other loadings of .46, .44, .36 and -.31. This person prefers magazines to television and does not consider television the family's primary source of entertainment.

Factor IV is the CASH BUYER, one face of an umbrella concept concerning credit; the other face appeared in several rotations as the CHARGE BUYER. As is no doubt obvious, the CASH BUYER likes to pay cash for purchases while the CHARGE

BUYER is happy to use credit and charge cards. The loadings in this rotation are $-.64$, $.61$, $-.55$ and $.47$. The factor accounts for 7.4 percent of the variance.

Factor V is the EXPERIMENTAL SHOPPER, accounting for 6.8 percent of the variance. This shopper especially likes new products and brands, and the variables consist of statements like "I often try new brands before my friends and neighbors do" ($.62$); other similar variables have loadings of $.59$, $.43$, $.36$ and $.34$.

Factor VI is PARENT, which accounts for 5.8 percent of the variance, and is made up of variables such as "When making important family decisions, consideration of the children should come first" ($.53$), with other loadings of $.46$ and $.38$.

Factor VII is SAFE SHOPPER, which accounts for 5.0 percent of the variance, and is made up of statements such as "I like to wait and see how other people like new brands before I try them" ($.47$), and other loadings of $.48$ and $.45$.

Factor VIII is SWINGER, which accounts for 4.6 percent of the variance and consists of seven variables showing a preference for partying and socializing in the evening; the loadings are $-.56$, $.54$, $.47$, $-.40$, $.39$, $-.38$, and $.35$.

Factor IX is DEBTOR who worries about future income and bills. The factor accounts for 4.3 percent of the variance, and consists of items such as "No matter how fast our income goes up, we never seem to get ahead" ($.56$), and loadings of $.47$ and $.41$.

Factor X is RURAL who seems to prefer country to city living and houses to apartments, although these variables did not appear in this particular rotation. The factor also consists of "Everyone should take walks, bicycle, garden or otherwise exercise several times a week" (.41); "I love the fresh air and out of doors" (.33); and "Once I find a brand I like, I stick with it" (.32). Since this factor replicated in six rotations, it was interpreted as a non-urban person who likes exercise. The factor accounted for 4.0 percent of the variance.

Factor XI is BARGAIN SHOPPER, accounting for 3.1 percent of the variance. It consists of statements such as "A person can save a lot of money by shopping around for bargains" (.46), and similar variables loading .44, .36 and .33.

Factor XII is BRAND NAME SHOPPER, accounting for 2.9 percent of the variance, and made up of variables such as "Nationally advertised brands are usually worth a few pennies more than a store's own brand" (.52), and other loading -.42 and .30.

Factor XIII is SPORTS and refers to a person who likes to talk about sports and participate in them. In this rotation only two variables loaded on the factor: "I thoroughly enjoy conversations about sports" (.52), and "I bowl, play tennis, golf or other active sports quite often" (.48). In other rotations, similar variables appear with these. The factor accounts for 2.7 percent of the variance.

Factor XIV is MESSY HOUSEKEEPER and, like CASH BUYER, is only one side of an umbrella concept concerning housekeeping. In other rotations the NEAT HOUSEKEEPER appears. The loading for the variables in this rotation are $-.54$, $.47$, $.42$, $.40$, and $-.41$. The factor accounts for 2.7 percent of the variables in this rotation, but appears much higher in the factor structure in other rotations.

Conclusions

The results of the crosstabulations, multiple discriminant analyses of demographic indicators and television programs, and the canonical correlation of use factor and life style factors are discussed in this section in relation to each of the twelve use factors. Conclusions regarding programming and advertising are included, and the original hypotheses of this study are reviewed in light of the findings.

The AROUSAL Function

Five to ten percent of younger adults (18-29 years) use television for AROUSAL (see Tables 17 and 41); the percentages are the same for men and women, although women especially enjoy telling others about programs. EXPERIMENTAL SHOPPERS, DEBTORS, and BARGAIN SHOPPERS make the strongest use of television in this way, although LEADERS may also make this use. Programs such as "Wonder Woman" epitomize the AROUSAL function; "Six Million Dollar Man," "Happy Days," and, less reliably, "Wide World of Sports" are programs that also provide

arousal. Viewers whose overall consumption of television is low, tend to make greater use of television for arousal than high consumers. The READER, RURAL and MESSY HOUSEKEEPER particularly do not use television for arousal.

This suggests to advertisers and time salesmen is that programs like "Wonder Woman" provide the ideal vehicle for advertisements of new products, new brands sales and discount promotions. The people who watch television for arousal are particularly interested in new things and bargains although they do not consciously seek out information of this kind, at least on television. Products of particular appeal to elite consumers (READERS) and people who live in the country (RURAL) are not advantageously placed on programs providing arousal. Additionally, products for home and house care will not find a receptive audience on programs providing arousal.

The consistent replication of the AROUSAL factor in the first position among uses of television should be of concern to those interested in reducing the quantity of violence on television. The dominance of the use of television for arousal may explain why there is enormous resistance on the part of the networks to changing the present content of television. Programming research that is intended to measure effects on an audience might benefit from utilization of content that provides arousal, and may have the most effect if the audience is composed of EXPERIMENTAL SHOPPERS, DEBTORS, and BARGAIN SHOPPERS. This is a conclusion that requires more direct testing than is provided by this study.

These results support Hypothesis I of this study regarding the appearance of a factor showing the use of television for arousal, but do not support Hypothesis III asserting that a "conversation" factor would appear. However, the fact that a statement about using programs as conversational subjects loaded in the AROUSAL factor, suggests the possibility of a full factor occurring were a sufficient number of appropriate variables included in the questionnaire and a higher number of factors rotated. (What may have been a "conversation" factor appeared in two of the oblique rotations, but the factor did not replicate sufficiently to be considered demonstrated by this study.)

The PLEASURE Function

Thirty to forty percent of adults use television for PLEASURE (see Tables 19 and 42), particularly women, and more likely younger than older people, although there is an increase of the PLEASURE function in the 50-62 age group. The EXPERIMENTAL SHOPPER, the DEBTOR, the BARGAIN SHOPPER, and RURAL make particular use of television for simple PLEASURE. And viewers whose consumption is generally high make greater use of television for PLEASURE than those with low consumption. Programs such as "Mike Douglas," "Dinah," "Wonder Woman," "Six Million Dollar Man," "Executive Suite," and "The Gong Show" epitomize this viewing function. The READER and the SAFE SHOPPER definitely do not use television for PLEASURE.

The conclusion to be drawn is that new brands and products, sales or special promotions, and products with non-urban

appeal are ideally placed on the above programs. Products appealing mainly to the more elite (READER) are not likely to reach their intended audience on these programs. Commercials that use an appeal implying "buy this because you know and trust it" are also unlikely to find their intended audience, since the SAFE SHOPPER does not watch television for PLEASURE.

The presence of this factor supports Hypothesis I of this study, that a factor called "Relax" by Greenberg, "relaxer" by Lichty, and "play" by Stephenson and Foley would appear. It refers to being simply entertained in a rather passive way by television, and is a function for television in the lives of a great number of the audience.

The INFORMATION Function

A decline in the use of television for INFORMATION occurs in the 30-49 age group (see Tables 21 and 43); the function otherwise shows strength for those 18-29 and 50+ years. The "get informed" aspect was salient for sixty percent of the audience, particularly women; and the "new insights" and getting "close to important people" aspects appeal to about thirty percent of the audience, again particularly women. Those 63+ years of age are most different from other age groups with regard to this function, which suggests they make the very strongest use of television for information. Also the READER, the PARENT, the EXPERIMENTAL SHOPPER, the BARGAIN SHOPPER, and RURAL use television for information. The

kinds of programs fitting this function include the anticipated network news programs, "CBS Reports," and "ABC News Specials," and "National Geographic Specials," "Dinah," and the "Carol Burnett Show." It is possible that older people consider that these two variety programs serve as much of an information function as news programs. The MOVER, the SWINGER, and the MESSY HOUSEKEEPER definitely do not use television for INFORMATION.

The conclusions to be drawn from this analysis with regard to television advertising and programming are that news programs are not suitable vehicles for advertising of products and services of appeal to people who move frequently or who are party goers. News programs are more likely to be watched by parents of children under 18, by people looking for new products and sales, by non-urban people, and by the elite. News programs are also not suitable for home care product advertising. News items about the interests of parents, bargain shoppers and rural dwellers, as well as new things and services ought to find a receptive audience.

These findings support Hypothesis II of this study; learning about the world (INFORMATION) separated from the learning about self function (MODELING) as originally hypothesized by Greenberg. Additionally, the conclusion of Wenner and others, that in comparison to other age groups, the news function of television predominates for the oldest people, is supported.

The COMPANY Function

Twice as many women as men use television for COMPANY; about twenty-four percent of women to escape loneliness (see Tables 23 and 44); about forty percent of women use it when there is no one with whom to talk. These predispositions are strongest for young women (18-29), but are also strong for older men (50+). In addition, the SWINGER uses television for COMPANY as does RURAL and the MESSY HOUSEKEEPER. Those who have a low income or no education or no children living at home make particular use of television for companionship. The programs epitomizing this function are "Dinah," and "The Jacksons'." LEADERS and SPORTS do not use television for COMPANY.

These findings imply that party supplies, drink, and restaurant advertising may be particularly appropriate for programs such as "Dinah" and "The Jacksons'." Products intended for urban apartments and for home upkeep in general may not find a receptive audience on those programs. Products connected with active sports and of special appeal to social leaders are unsuitable, as are high income, high education, or child appeal products.

Two types of "companionship" were hypothesized for this study; it was assumed that the background noise function or the social substitute function would subsume companionship in general. This proved not to be the case; a COMPANY factor was demonstrated distinct from the other two functions. These

findings, therefore, clarify a portion of Hypothesis I.

The NOT USING TELEVISION Function

The NOT USING TELEVISION function is one difficult to define and from which to draw conclusions. It refers to a non-function of television in that many people say they forget the set is turned on and often have it on without really watching (see Tables 25 and 45). This use is more common for women than for men, particularly younger women. It may be that LEADERS, SWINGERS, and DEBTORS do pay more attention to television, while MOVERS, PARENTS, RURAL, BARGAIN SHOPPERS, and MESSY HOUSEKEEPERS pay less attention. People who do watch, prefer programs like "National Geographic Specials"; people who do not pay attention prefer programs like "Wide World of Sports," the "Tonight Show," and "Happy Days." The meaning of these findings is not readily apparent. It may be that they refer to Lichty's "babysitting" function of television or to the fact that one member of a household will watch while another ignores the set or leaves the room. This function was not anticipated in the literature, except as a "babysitting" concept, and was not hypothesized in this study.

The SOCIAL SUBSTITUTE Function

Although fifty percent of adults do not use television as a SOCIAL SUBSTITUTE (see Tables 27 and 46), ten to twenty percent of adults, those with low education and low income, do use television in this way; the very strongest use is with

people over age 63. Also the BARGAIN SHOPPER and the PARENT make definite use of television as a substitute for social interaction, watching programs like "Mike Douglas," "Dinah," "The Jacksons'," and "The Gong Show."

Those who do not use television as a social substitute include RURAL, MESSY HOUSEKEEPER, MOVER, READER, EXPERIMENTAL SHOPPER, and SWINGER. It can be assumed that program content or advertising of particular appeal to any of these groups might perform better placed on another program. However, this inference points to the issue of possible conflicts in appeals. For example, the SWINGER and RURAL do make use of "Dinah" and "The Jacksons'" for COMPANY but do not use it as a SOCIAL SUBSTITUTE. One may conclude that the SWINGER and RURAL have less socializing than they would like, but do not have so little, in fact, as to need to use television instead of people; they use television in addition to people, whereas the BARGAIN SHOPPER and PARENT apparently use television instead of people. These conclusions need further substantiation, but they are supported in the literature by Horton and Wohl's concept of para-social interaction, by Hess and Nordenstreng, and by Foley's study. The appearance of the SOCIAL SUBSTITUTE factor in this study supports Hypothesis IV of the research hypotheses.

The DISTRACTION Function

The use of television for DISTRACTION has particular appeal to young men; twenty percent of adults strongly agree

with this use (see Tables 29 and 47). However, forty to fifty percent of adults definitely disagree with this use of television. The programs that characterize the use of television to forget work and problems (DISTRACTION) are "Geraldo Rivera's Thursday Night Special" and "Busting Loose." The EXPERIMENTAL SHOPPER, DEBTOR, and BARGAIN SHOPPER make particular use of television for distraction, and the LEADER and SPORTS show some predisposition to this use. The READER and SWINGER definitely do not use television for distraction.

For the purpose of advertising and programming, the conclusions to be drawn are that products aimed at young men will find an appropriate audience on "Geraldo Rivera" and "Busting Loose," provided they are not products of special appeal to READER and SWINGER. The presence of this factor supports Hypothesis I of this study which was based on Greenberg's study of children and the pilot study.

The MODELING Function

Seven to ten percent of adults use television for MODELING, although this use is strongest among men and women over the age of 63 (see Tables 31 and 48). Adults with low income, but not necessarily low education as might be expected, use television for behavior models. However, sixty-five percent of adults definitely disagreed with learning "how to act" from television. In particular, RURAL and MESSY HOUSE-KEEPER do not use television as a role model, but READER and SAFE SHOPPER do, while LEADER shows some predisposition to

this use. The kind of programs selected for behavior models are "Mike Douglas," "Good Morning America," and "The Jacksons!."

One may conclude that product advertising that employs authority figures in the hopes that audience members will copy their behavior will be unsuccessful with products intended for RURAL and MESSY HOUSEKEEPER. At the same time, the READER and the SAFE SHOPPER, and possibly the LEADER, may be influenced to imitate the behavior shown on television. It appears that these kinds of people seek out programming that shows other people in their actual personalities, not acting; the READER in particular apparently watches both news and talk shows. The SAFE SHOPPER prefers talk shows, as may the LEADER.

These patterns suggest that the fears of many who claim an undue influence by television on behavior need to restrict their hypotheses to certain types of people. Since neither the READER nor the LEADER is likely to be a conformist, but rather seeks out elite or new behaviors ahead of others, television's influence on them is probably of less general concern than is its influence on the SAFE SHOPPER. Other measures would be required to verify this, but it seems likely that the SAFE SHOPPER might be the ideal subject for demonstrating television's effects in the area of conformist modeling. At any rate, the presence of a MODELING factor in this study confirms Hypothesis II, and supports the conclusion of Lichty and Foley.

The PASS TIME Function

Between twelve and twenty percent of adults use television to PASS TIME (see Tables 33 and 49). This function appears most frequently among the young (18-29) and the old (63+) groups, and equally among men and women. The program that typifies this use of television is "The Gong Show." Another program used to pass time is "The Tony Randall Show." None of the consumer life styles studied here showed a particular tendency to use television to PASS TIME, but the READER, DEBTOR and EXPERIMENTAL SHOPPER showed a preference for not using television in that way.

The use may refer to a lead-in function to other programs on the part of the kinds of above programs, or it may refer to the least objectionable programming for people who switch on the television with no particular goal except the passage of time. The PASS TIME aspect of viewing needs clarifying statements added in future research into functions of television viewing. For advertisers these results suggest that programs which function to pass time are not suitable for introducing new products, advertising sales, or promoting products and services directed at the elite viewer. For the programmer these results suggest an explanation for indifferent ratings on the part of certain programs. The appearance of the factor supports Hypothesis I of this study, derived from Greenberg's two types of "pass time," the pilot study, and Lichty's "time filler."

The BACKGROUND NOISE Function

The BACKGROUND NOISE function of television appears to be important in understanding how television is used; in some rotations, this factor appeared in the first position accounting for the majority of the variance. Five to ten percent of men and ten to twenty percent of women use television as BACKGROUND NOISE, claiming they "get more done" when the set is on (see Tables 35 and 50). This use is strongest in the 18-29 age group, and twice as strong for women as for men. In particular, the SWINGER shows a predisposition toward this use. High consumption viewers also tend to use television in this way. However, fifty percent of adults definitely disagree with this use and the LEADER and SPORTS definitely do not use television as background to other activities.

The programs that typify this use are varied, but tend to be fringe rather than prime time programming: "Mike Douglas," "Good Morning America," "Geraldo Rivera," "Mary Hartman, Mary Hartman," "Dinah," "Busting Loose," "Executive Suite," and "The Gong Show." These programs may communicate so clearly through their sound that their visuals are not generally necessary. They may function as time clocks for viewers who follow schedules. Another alternative is that these programs function as child-sitters to aid parents in accomplishing their tasks. Programmers may choose to emphasize the regularity and time announcement aspects of these programs, and expend greater effort on sound communication than on changing

visuals in order to operate around this use of television. Advertisers would be advised to place party, restaurant and fashion advertisements on fringe programs, and restrict appeals to leaders and sports enthusiasts.

These uses need clarification in future empirical studies. The presence of a background noise factor supports Hypothesis I of this study, although the function was not sharply distinguished from companionship in the previous research of Lichty and Foley upon whom the Hypothesis was based.

The ESCAPE Function

Five to fifteen percent of men and women use television for ESCAPE, conversely, fifty percent of adults report they do not use viewing this way (see Tables 37 and 51). Those who are generally low consumption viewers, have low income, or are 63+ years tend to use television for physical escape from their surroundings. The EXPERIMENTAL SHOPPER, DEBTOR, and BARGAIN SHOPPER make particular use of television in this way. The programs epitomizing this use are "Wonder Woman," "Mary Hartman, Mary Hartman," and "The Gong Show." These programs make especially desirable vehicles for advertisements of sales and special promotions, as well as for introduction of new brands, products and services. Since nine percent of viewers like to "imagine taking part" in the program, the fantasy aspects of the content seem important. Because READERS specifically do not use television for escape, products and content intended for an elite audience should not be

used in these programs.

The separation of a physical escape function from a distraction function where the purpose is primarily to forget other things was not clear in the literature. Pearlin refers to the "escape" function and Foley to "withdrawal." This use was not hypothesized separately from the DISTRACTION factor for this study.

The BOREDOM Function

Thirty to thirty-five percent of men and women use television when bored and claim to use it out of habit (see Tables 40 and 52). This use is strongest for young adults, 18-29 years. The BOREDOM function for television was hypothesized based on Greenberg's findings relating to habitual use, but the factor does not correlate with particular life styles and does not discriminate particular programs. It may be that this use is so generalized as to provide no specific inferences for advertising and programming.

Recommendations for Future Research

In subsequent surveys examining the functions of television, the addition of a few more statements to the questionnaire should narrow the meaning of some of the factors emerging in this study. For example, the addition of "When I have to wait for a while, I often turn on television," and "I often watch any program just to fill in the time until something I really want to see comes on," should clarify the meaning of the

PASS TIME factor. If one statement loads with the factor, it will provide precise definition of the reason for the PASS TIME use.

To determine if a factor relating to the use of television for conversation does exist separately from the AROUSAL function, the addition of statements such as "Television programs give me something to talk about," and "I often watch a program just because my friends will be talking about it," are recommended. If one or more of these variables appears in factor, possibly with the statement, "I enjoy telling people about television programs," a function supporting the Davis et al. research will have been demonstrated.

The BACKGROUND NOISE factor would be more distinct if statements such as the following were included in the questionnaire: "I use television to keep the children busy so I can get things done"; "I use the TV as a clock to help me keep on schedule"; "TV lets me know what time it is"; and "I use my regular programs to know when I have to be ready to leave the house." The appearance of one of these variables in the factor would distinguish between the babysitting and clock functions which may be elements of the BACKGROUND NOISE function.

Three additional statements that may prove useful based on the findings in this study are: "The TV set is often on when someone else is watching although I pay no attention,"

"I often leave the set on while cooking or housecleaning in another room," and "Frequently the TV set is left on for a long time with no one watching it while I am on the telephone, doing the laundry or vacuuming, or even out in the garden." The loading of one or more of these statements with the NOT USING TELEVISION factor would provide information that was not rendered by this study.

The method of collecting data for this study proved generally effective. Leaving questionnaires at the door and returning one or more times to collect them provided a high rate of return for a large sample, yet was efficient in surveyors' time. The number of responses from minority groups was low for two reasons: the test community had a lower ratio of Blacks to whites than the national norm (see Table 15), and those Blacks approached were less willing to complete the questionnaires than other subjects. To achieve a higher ratio of minority responses, some form of compensation may be required.

The statistical methods employed in this study were state-of-the-art. As new procedures become available, this data may be reanalyzed to provide further relationships and conclusions.

Television Uses and Effects

In mass communication research theory, the uses and gratifications approach is seen as a mediating influence between the mass media and its effects. For this particular

study it was assumed that the ways people use television mitigates possible effects from that medium. Since few empirical studies had gathered direct evidence on the actual spectrum of uses of television, the major purpose of this study was to clearly establish those uses. The analysis of survey responses from nearly two thousand adults provides this information. The categories of functions were named as follows in this study: arousal, pleasure, information, company, not using television, social substitute, distraction, modeling, pass time, background noise, escape, and boredom.

When these uses were analyzed in relation to demographic characteristics, different consumer life styles, and specific program titles, the uses discriminated between kinds of people and kinds of viewing. This study not only clearly demonstrated that people use the medium these different ways, but that these uses are related to different viewing predispositions. If people choose to watch specific programs for identifiable reasons, it follows that the possible television effects will vary predictably for the different kinds of people. This means that future research into the effects of television would benefit from preliminary analysis of subjects according to the uses they make of television in general and of certain programs in particular.

Clearly a given program may serve more than one use at one time, but these findings show that some kinds of people seldom make use of television and that others have definite

predispositions toward particular uses. The effect that a program or the medium itself can have is likely to be strongly limited by the use the program or medium is serving. A conclusion which can be drawn is that people who make use of television for arousal would make appropriate subjects for demonstrating violence effects, while people who use television for role modeling would be most suitable for demonstrating social behavior effects. This study has shown a heuristic purpose for research into the functions of television: evidence as to the function(s) television is serving for individuals needs to be gathered prior to testing for effects. Utilizing television functions as controlled variables may serve to eradicate in future research many of the conflicting results in past research.

The findings in this study lend themselves to questioning the entire foundation of the broadcasting industry: local and network television services are currently based on mass audience ratings and demographics. There has been some academic investigation of psychographic evaluation of audiences, in terms of general personality traits, with unreliable results. The advertising industry has opted for life style measures when feasible to obtain a clearer picture of the clients for their products. The television industry remains locked into ratings that count the "homes using television" and the age, sex, and socio-economic status of the family, without investigating how programs are being used by individual people.

Measuring the audience in terms of homes with television sets turned on and family demographics leads to swollen figures for viewing at a given time, and ignores the behavior of the segments of the audience that are of particular importance to an advertiser. Television uses can divide the audience more meaningfully and more accurately. This study has located dimensions by which the homogeneous group of viewers of a specific program can be identified. Description and quantification of this group is of markedly more value than mass demographics.

Another problem is that ratings are presently used as both the measure of current success and the predictor of future success. However, as yet, predicting from ratings has proved more of an art than a science. Study of the functions of viewing is another tool for programmers. This tool can provide more accurate data on the behavior of the audience than ratings based on audimeters and diaries, and the data will prove of more practical use to advertisers than demographics. Commercials with styles that conflict with the uses being made of the surrounding program are at a disadvantage and are likely to be considered "interruptions." The ascertainment of uses as undertaken in this study can provide quantifiable indicators of both programs and commercials.

These findings also suggest that a likely way of promoting the public "interest, convenience and necessity" is to meet the needs of all of the people by responding to the uses they make of television. This might be accomplished by

providing one or more programs specifically aimed at each of the major uses of television at every hour and/or half-hour. Cable television with its multiplicity of channels could be utilized in this way if counter programming with identical types of programs is not allowed to eliminate cable's potential for diversity. These findings also suggest that the information provided by current rating services is misleading. Since possibly one-fifth or even one-half of all adults at home when the television set is turned on are not watching or even listening, measures of "homes using television" appear dubious. Commercials could consequently be placed more effectively both from the audience's and the advertiser's perspectives, and programming could also be supplied that more directly meets the needs of the audience.

Future research must move in the direction of psychographic and life style descriptions of the mass media audience, measures of individuals actually using the medium, and distinctions between the functions that the medium is serving for those individuals. In this way we may all come closer to understanding what effects the mass media have on our lives.

APPENDIX A

Survey Questionnaire

BOWLING GREEN STATE UNIVERSITY
TELEVISION SURVEY

We want to thank you for your contribution to our research about television. This study is for the Radio-Television-Film Area of the School of Speech Communication at Bowling Green State University. You may telephone the University at 372-2138 for confirmation of the legitimacy of this study.

We need a variety of individual opinions about television, so please fill out the questionnaire from your own point of view. The information is confidential, and your name and phone number are NOT requested.

We will pick up the questionnaire from near your mailbox tomorrow morning. Thank you for your time and your help.

Susan Eastman and David Tucker

DIRECTIONS

For each statement, please circle the number that best describes your feelings about that statement. Please be sure to circle one number for each statement. The higher the number, the more you tend to agree with the statement. The lower the number, the more you tend to disagree with the statement.

<u>I WATCH TV BECAUSE:</u>	<u>DEFINITELY</u> <u>DISAGREE</u>			<u>DEFINITELY</u> <u>AGREE</u>		
1. it's almost like a human friend.	1	2	3	4	5	6
2. watching TV helps to keep me informed of the new things that are happening in our country.	1	2	3	4	5	6
3. it's a habit	1	2	3	4	5	6
4. it helps me when I'm bored	1	2	3	4	5	6
5. it helps me learn things about myself	1	2	3	4	5	6
6. it's thrilling	1	2	3	4	5	6
7. I can forget about work.	1	2	3	4	5	6
8. it calms me down when I'm in a temper	1	2	3	4	5	6
9. I won't be alone	1	2	3	4	5	6
10. television programs give me good advice about how to act in unusual situations.	1	2	3	4	5	6
11. I just like to watch	1	2	3	4	5	6
12. I have nothing better to do.	1	2	3	4	5	6
13. it shows me how I'm supposed to act.	1	2	3	4	5	6
14. it excites me.	1	2	3	4	5	6
15. when I watch television, I tend to forget about other things happening around me.	1	2	3	4	5	6
16. I feel more relaxed after I watch television.	1	2	3	4	5	6
17. it keeps me company when there's no one to talk to.	1	2	3	4	5	6
18. I find I can get more done when the TV set is on.	1	2	3	4	5	6
19. it's so much fun.	1	2	3	4	5	6
20. time passes more quickly when I am watching TV.	1	2	3	4	5	6
21. I enjoy telling people about television programs.	1	2	3	4	5	6
22. I like to have the set turned on while I am doing other things.	1	2	3	4	5	6
23. television stirs me up.	1	2	3	4	5	6
24. I can learn what can happen to me.	1	2	3	4	5	6
25. I like the way television lets you get close to important people.	1	2	3	4	5	6

MMH

<u>I WATCH TV BECAUSE:</u>		<u>DEFINITELY DISAGREE</u>				<u>DEFINITELY AGREE</u>	
26.	even if I am not watching all the time, I like to keep the set turned on for companionship.	1	2	3	4	5	6
27.	television programs give me new insights into our complex world.	1	2	3	4	5	6
28.	I just enjoy watching.	1	2	3	4	5	6
29.	it gives me something to do..	1	2	3	4	5	6
30.	sometimes I watch television just to put off doing other things that need to be done.	1	2	3	4	5	6
31.	it makes me feel less lonely.	1	2	3	4	5	6
32.	it shows how other people deal with the same problems I have.	1	2	3	4	5	6
33.	I often have the television set turned on without really watching it.	1	2	3	4	5	6
34.	I can get away from the rest of the family.	1	2	3	4	5	6
<u>NEW STATEMENTS:</u>							
35.	When I watch television, I want to be left alone.	1	2	3	4	5	6
36.	Watching television is as good as talking to friends.	1	2	3	4	5	6
37.	I seldom watch television when I am alone.	1	2	3	4	5	6
38.	When I visit my friends, we often watch television.	1	2	3	4	5	6
39.	I often forget that the TV set is turned on.	1	2	3	4	5	6
40.	When I watch television, I like to imagine myself taking part in the program.	1	2	3	4	5	6
41.	Before going shopping, I sit down and prepare a complete shopping list.	1	2	3	4	5	6
42.	Information I get about a product from a friend is better than what I get from advertising.	1	2	3	4	5	6
43.	I spend a lot of time talking with my friends about products and brands.	1	2	3	4	5	6
44.	My choice of brands for many products is influenced by advertising.	1	2	3	4	5	6
45.	I buy many things with a credit card or charge card.	1	2	3	4	5	6
46.	My idea of housekeeping is "once over-lightly."	1	2	3	4	5	6
47.	I am careful what I eat in order to keep my weight under control.	1	2	3	4	5	6
48.	I like to wait and see how other people like new brands before I try them.	1	2	3	4	5	6
49.	I am the kind of person who takes short cuts in cooking.	1	2	3	4	5	6
50.	I usually look for the lowest possible prices when I shop.	1	2	3	4	5	6

- 3 -

STATEMENTS:	DEFINITELY DISAGREE			DEFINITELY AGREE		
	1	2	3	4	5	6
51. In the last ten years we have lived in at least three different cities.	1	2	3	4	5	6
52. I read the newspaper every day.	1	2	3	4	5	6
53. We will probably move at least once in the next five years.	1	2	3	4	5	6
54. Classical music is more interesting than popular music.	1	2	3	4	5	6
55. I spend money on myself that I should spend on my family.	1	2	3	4	5	6
56. Five years from now the family income will probably be a lot higher than it is now.	1	2	3	4	5	6
57. Grocery shopping is a terrible waste of time.	1	2	3	4	5	6
58. When I find a new brand I like, I usually tell my friends about it.	1	2	3	4	5	6
59. A store's own brand is usually just as good as a nationally advertised brand.	1	2	3	4	5	6
60. I often try new brands before my friends and neighbors do.	1	2	3	4	5	6
61. In the past year we have borrowed money from a bank or a finance company.	1	2	3	4	5	6
62. There is too much advertising on television.	1	2	3	4	5	6
63. I enjoy going through an art gallery.	1	2	3	4	5	6
64. I like to pay cash for everything I buy.	1	2	3	4	5	6
65. When I see a new brand on the shelf, I often buy it just to see what it's like.	1	2	3	4	5	6
66. I bowl, play tennis, golf or other active sports quite often.	1	2	3	4	5	6
67. I like parties where there is lots of music & talk.	1	2	3	4	5	6
68. I thoroughly enjoy conversations about sports.	1	2	3	4	5	6
69. Television is our primary source of entertainment.	1	2	3	4	5	6
70. My children are the most important thing in my life.	1	2	3	4	5	6
71. Dinner is not complete without dessert.	1	2	3	4	5	6
72. It is good to have charge accounts.	1	2	3	4	5	6
73. Our days seem to follow a definite routine such as eating meals at a regular time, etc.	1	2	3	4	5	6
74. I think I have more self-confidence than most people.	1	2	3	4	5	6
75. I have somewhat old-fashioned tastes and habits.	1	2	3	4	5	6

76.-80.

(continue next page)

<u>STATEMENT:</u>	<u>DEFINITELY</u>			<u>DEFINITELY</u>		
	<u>DISAGREE</u>			<u>AGREE</u>		
X1. An important part of my life and activities is dressing smartly.	1	2	3	4	5	6
X2. Things just don't taste right if they come out of a can.	1	2	3	4	5	6
X3. Magazines are more interesting than television.	1	2	3	4	5	6
X4. I use many of the brands and products that my mother did.	1	2	3	4	5	6
X5. I take care of the money and pay the bills.	1	2	3	4	5	6
X6. I think I have a lot of personal ability.	1	2	3	4	5	6
X7. To buy anything, other than a house or a car, on credit is unwise.	1	2	3	4	5	6
X8. When buying appliances, it pays to get the best model even though it is more expensive.	1	2	3	4	5	6
X9. People come to me more often than I go to them for information about brands.	1	2	3	4	5	6
X10. I love the fresh air and out of doors.	1	2	3	4	5	6
X11. Our family travels quite a lot.	1	2	3	4	5	6
X12. I belong to one or more clubs.	1	2	3	4	5	6
X13. I must admit I really don't like household chores.	1	2	3	4	5	6
X14. I keep away from brands I have never heard of.	1	2	3	4	5	6
X15. I like to be considered a leader.	1	2	3	4	5	6
X16. A person can save a lot of money by shopping around for bargains.	1	2	3	4	5	6
X17. I'd like to spend a year in London or Paris.	1	2	3	4	5	6
X18. I usually watch the advertisements for announcements of sales.	1	2	3	4	5	6
X19. I would rather spend a quiet evening at home than go out to a party.	1	2	3	4	5	6
X20. I just plain neglect my appearance.	1	2	3	4	5	6
X21. I like to try new and different things.	1	2	3	4	5	6
X22. Everyone should take walks, bicycle, garden or otherwise exercise several times a week.	1	2	3	4	5	6
X23. I like to go grocery shopping.	1	2	3	4	5	6
X24. I would rather live in or near a big city than in or near a small town.	1	2	3	4	5	6
X25. I like to think I am a bit of a swinger.	1	2	3	4	5	6

<u>STATEMENT:</u>	<u>DEFINITELY</u>				<u>DEFINITELY</u>	
	<u>DISAGREE</u>				<u>AGREE</u>	
X26. I take a great deal of pride in my home.	1	2	3	4	5	6
X27. When making important family decisions, consideration of the children should come first.	1	2	3	4	5	6
X28. I stay home most evenings.	1	2	3	4	5	6
X29. I hate to take pills.	1	2	3	4	5	6
X30. On a job, security is more important than money.	1	2	3	4	5	6
X31. I have never been really outstanding at anything.	1	2	3	4	5	6
X32. My friends or neighbors often come to me for advice.	1	2	3	4	5	6
X33. I like television news programs.	1	2	3	4	5	6
X34. I like to work on community projects.	1	2	3	4	5	6
X35. Nationally advertised brands are usually worth a few pennies more than a store's own brand.	1	2	3	4	5	6
X36. I never worry about my health.	1	2	3	4	5	6
X37. Spiritual values are more important than material things.	1	2	3	4	5	6
X38. Everyone should take vitamins.	1	2	3	4	5	6
X39. I like to read.	1	2	3	4	5	6
X40. If I had my life to live over I would sure do things differently.	1	2	3	4	5	6
X41. No matter how fast our income goes up we never seem to get ahead.	1	2	3	4	5	6
X42. Once I find a brand I like, I stick with it.	1	2	3	4	5	6
X43. I don't like to take chances.	1	2	3	4	5	6
X44. I usually keep where I live very neat and clean.	1	2	3	4	5	6
X45. I do more things socially than do most of my friends.	1	2	3	4	5	6
X46. Television should have more serious programs.	1	2	3	4	5	6
X47. Our family is too heavily in debt today.	1	2	3	4	5	6
X48. Television programs are more interesting today than they were five years ago.	1	2	3	4	5	6
X49. I would rather live in an apartment than a house.	1	2	3	4	5	6
X50. A lot of convenience foods on the market today just aren't very tasty.	1	2	3	4	5	6

PLEASE MARK THE APPROPRIATE BOX:

X51. Male _____ Female _____

X52. AGE: 18-29 _____ 30-39 _____ 40-49 _____ 50-62 _____ 63 & above _____

HIGHEST EDUCATION COMPLETED:

X53. Elementary _____ High School _____ 2 yr. College or Tech. School _____
4 yr. College or University _____ Graduate School _____

TOTAL FAMILY ANNUAL INCOME:

X54. Under \$5,000 _____ \$5-10,000 _____ \$10-20,000 _____ Over \$20,000 _____

ON THE AVERAGE WEEKDAY, I WATCH TELEVISION:

X55. Rarely _____ Less than 2 hours _____ 3-4 hours _____ More than 4 hours _____

X56. I WORK part-time _____ full-time _____ DON'T WORK _____ Student _____

AT HOME most weekdays _____ NOT AT HOME most weekdays _____

X57. HAVE CHILDREN under age 18 living at home _____

DO NOT HAVE CHILDREN under age 18 living at home _____

I WATCH:	NEVER	OCCASIONALLY	REGULARLY	ONE OF MY	NOT ONE OF MY
				FAVORITES	FAVORITES
X58. Edge of Night	_____	_____	_____	_____	_____
X59. CBS Reports	_____	_____	_____	_____	_____
X60. Mike Douglas	_____	_____	_____	_____	_____
X61. Dinah	_____	_____	_____	_____	_____
X62. Gong Show	_____	_____	_____	_____	_____
X63. The Young & the Restless	_____	_____	_____	_____	_____
X64. Wonder Woman	_____	_____	_____	_____	_____
X65. Love of Life	_____	_____	_____	_____	_____
X66. Emergency	_____	_____	_____	_____	_____
X67. Six Million Dollar Man	_____	_____	_____	_____	_____
X68. Lanigan's Rabbi	_____	_____	_____	_____	_____
X69. Busting Loose	_____	_____	_____	_____	_____
X70. Another World	_____	_____	_____	_____	_____
X71. Carol Burnett Show	_____	_____	_____	_____	_____
X72. The Jacksons	_____	_____	_____	_____	_____
X73. Wide World of Sports	_____	_____	_____	_____	_____
X74. General Hospital	_____	_____	_____	_____	_____
X75. ABC News Specials	_____	_____	_____	_____	_____
X76-X80.					

(continue next page)

I WATCH:				ONE OF MY	NOT ONE OF MY
	NEVER	OCCASIONALLY	REGULARLY	FAVORITES	FAVORITES
Z1. Search for Tomorrow	_____	_____	_____	_____	_____
Z2. Ryan's Hope	_____	_____	_____	_____	_____
Z3. ABC News	_____	_____	_____	_____	_____
Z4. Tony Randall Show	_____	_____	_____	_____	_____
Z5. Love of Life	_____	_____	_____	_____	_____
Z6. CBS Evening News	_____	_____	_____	_____	_____
Z7. Somerset	_____	_____	_____	_____	_____
Z8. Executive Suite	_____	_____	_____	_____	_____
Z9. Tonight Show/Johnny Carson	_____	_____	_____	_____	_____
Z10. As the World Turns	_____	_____	_____	_____	_____
Z11. Days of Our Lives	_____	_____	_____	_____	_____
Z12. NBC Evening News	_____	_____	_____	_____	_____
Z13. Happy Days	_____	_____	_____	_____	_____
Z14. Guiding Light	_____	_____	_____	_____	_____
Z15. Good Morning America	_____	_____	_____	_____	_____
Z16. The Doctors	_____	_____	_____	_____	_____
Z17. Mary Hartman, Mary Hartman	_____	_____	_____	_____	_____
Z18. One Life to Live	_____	_____	_____	_____	_____
Z19. National Geographic Specials	_____	_____	_____	_____	_____
Z20. Geraldo Rivera: Thursday Night Special	_____	_____	_____	_____	_____
Z21. The 4:00 Movie ALL MY CHILDREN	_____	_____	_____	_____	_____

STATEMENT:	DEFINITELY DISAGREE			DEFINITELY AGREE		
Z22. Most of the day is spent planning meals and doing housework.	1	2	3	4	5	6
Z23. I would like to have an affair.	1	2	3	4	5	6
Z24. I always make it a point to read the editorial section of the newspaper.	1	2	3	4	5	6
Z25. I worry about being robbed.	1	2	3	4	5	6
Z26. TV teaches me how to handle my personal problems.	1	2	3	4	5	6
Z27. I prefer to spend a vacation at home rather than traveling.	1	2	3	4	5	6
Z28. I see myself as one of the common people.	1	2	3	4	5	6
Z29. I watch television so that I can forget about my problems.	1	2	3	4	5	6
Z30. I spend most of my day at home.	1	2	3	4	5	6

STATEMENTS:	DEFINITELY			DEFINITELY		
	DISAGREE			AGREE		
Z31. Since I don't travel much, I try to make my home look as nice as possible.	1	2	3	4	5	6
Z32. I usually achieve the goals I set for myself.	1	2	3	4	5	6
Z33. I prefer a daily routine to an uncertain future.	1	2	3	4	5	6
Z34. When things get too hectic, I turn on television.	1	2	3	4	5	6
Z35. Life is very risky.	1	2	3	4	5	6
Z36. The families which appear on television really exist.	1	2	3	4	5	6
Z37. I wish I lived in a different time.	1	2	3	4	5	6
Z38. Having a television is like having a friend when you need company.	1	2	3	4	5	6
Z39. TV teaches me how the world really is.	1	2	3	4	5	6
Z40. I like to travel.	1	2	3	4	5	6
Z41. I am just not the type to go out and meet people socially.	1	2	3	4	5	6
Z42. I attempt to keep my home looking as nice as possible.	1	2	3	4	5	6
Z43. I feel I am good looking.	1	2	3	4	5	6
Z44. All I do for most of the day is housework.	1	2	3	4	5	6
Z45. I wish I were a bird so I could fly away from here.	1	2	3	4	5	6
Z46. I read the daily paper.	1	2	3	4	5	6
Z47. My life is dull.	1	2	3	4	5	6
Z48. I would like to visit exotic and far away places.	1	2	3	4	5	6
Z49. I believe in myself.	1	2	3	4	5	6
Z50. I try to give my life a daily routine.	1	2	3	4	5	6
Z51. Our family income is stable.	1	2	3	4	5	6
Z52. Reading the daily paper is a part of my life.	1	2	3	4	5	6
Z53. I worry about the future.	1	2	3	4	5	6
Z54. TV helps me in my daily life.	1	2	3	4	5	6
Z55. I am too shy and reserved.	1	2	3	4	5	6
Z56. I am very particular about the way my home appears.	1	2	3	4	5	6
Z57. I am admired by others.	1	2	3	4	5	6
Z58. The thought of visiting strange places excites me.	1	2	3	4	5	6
Z76.-Z80.						

(Thank you for assisting with this research. Please put the questionnaire near your mailbox.)

APPENDIX B

Pilot Life Style Factor Composition

Table 76
Pilot Life Style Study
Factor I: OPINION LEADER

Variables	Percent of Total Variance Accounted For: 9.0	Loadings*
57. I think I have a lot of personal ability		0.65
128. I think I have more self-confidence than most people		0.65
72. I like to be considered a leader		0.63
99. I like to work on community projects		0.60
113. I do more things socially than do most of my friends		0.58
52. I am more independent than most people		0.53
96. My friends or neighbors often come to me for advice		0.52
84. I like to think I am a bit of a swinger		0.46
61. People come to me more often than I go to them for information about brands		0.45
64. I belong to one or more clubs		0.45

* Rounded off to two places

Table 77
Pilot Life Style Study
Factor II: ROLE TRADITIONALIST

Variables	Percent of Total Variance Accounted For: 7.8	Loadings
86. When making important family decisions, consideration of the children should come first		0.63
47. My children are the most important thing in my life		0.57
77. You get what you pay for most of the time		0.56
46. To me health is the most important thing in the world		0.55
45. Television is our primary source of entertainment		0.53
48. Investing in the stock market is too risky for most families		0.52
81. Everyone should take walks, bicycle, garden or otherwise exercise several times a week		0.52
111. I don't like to take chances		0.49
95. I have never been really outstanding at anything		0.47
73. A person can save a lot of money by shopping around for bargains		0.43
94. On the job, security is more important than money		0.42
55. Part of each vacation should be educational		0.34
93. Advertising cannot sell me anything that I don't want		0.33

Table 78
Pilot Life Style Study
Factor III: LIGHT HOUSEKEEPER

Variables	Percent of Total Variance Accounted For: 3.6	Loadings
66. I must admit that I dislike cleaning		0.66
31. My idea of housekeeping is "once over lightly"		0.59
8. My choice of brands for many products is influenced by advertising		0.37

Table 79
Pilot Life Style Study
Factor IV: ARTISTIC CONSUMER

Variables	Percent of Total Variance Accounted For: 3.4	Loadings
39. I enjoy going through an art gallery		0.60
51. Magazines are more interesting than television		0.57
106. I like to read		0.57
18. Classical music is more interesting than popular music		0.52
9. There should be a gun in every home		-0.47
25. Air pollution is one of our biggest problems today		0.39
3. A woman's place is in the home		-0.34

Table 80
Pilot Life Style Study
Factor V: MOBILE CONSUMER

Variables	Percent of Total Variance Accounted For: 3.2	Loadings
17. I like to go camping		0.63
121. Movies should be censored		-0.63
15. We will probably move at least once in the next five years		0.60
65. There is too much emphasis on sex today		-0.58
123. I try not to serve foods that are high in cholesterol		-0.58
14. I read the newspaper every day		-0.49
69. The father should be the boss in the house		-0.47
10. My greatest achievements are still ahead of me		0.41
1. I do not get enough sleep		0.40
90. I stay home most evenings		-0.39
110. Once I find a brand I like, I stick with it		-0.35

Table 81
Pilot Life Style Study
Factor VI: ANTI-SHOPPER 1

Variables	Percent of Total Variance Accounted For: 2.8	Loadings
4. I love to bake and frequently do		-0.67
2. Before going shopping, I sit down and prepare a complete shopping list		-0.51
82. I like to go grocery shopping		-0.50
124. Dinner is not complete without dessert		-0.47
6. I usually have my dresses altered to conform to the latest hemline levels		-0.44
7. I spend a lot of time talking with my friends about products and brands		-0.42
23. When I find a new brand I like, I usually tell my friends about it		-0.37

Table 82
Pilot Life Style Study
Factor VII: ANTI-SHOPPER 2

Variables	Percent of Total Variance Accounted For: 2.5	Loadings
118. I would rather live in an apartment than a house		0.58
78. I just plain neglect my appearance		0.55
71. The woman should run the family		0.41
21. Grocery shopping is a terrible waste of time		-0.34

Table 83

Pilot Life Style Study

Factor VIII: BRAND NAME SHOPPER

Variables	Percent of Total Variance Accounted For: 2.3	Loadings
102. Nationally advertised brands are usually worth a few pennies more than a store's own brand		0.61
70. I dread the future		0.61
24. A store's own brand is usually just as good as a nationally advertised brand		-0.44

Table 84

Pilot Life Style Study

Factor IX: EXTROVERT

Variables	Percent of Total Variance Accounted For: 2.3	Loadings
43. I like parties where there is lots of music and talk		0.67
42. I bowl, play tennis, golf or other active sports quite often		0.66
44. I thoroughly enjoy conversations about sports		0.65
98. I exercise regularly		0.51
76. I would rather spend a quiet evening at home than go out to a party		-0.34
30. Medicare should be expanded to cover people of all ages		0.34

Table 85
Pilot Life Style Study
Factor X: CASH BUYER

Variables	Percent of Total Variance Accounted For: 2.1	Loadings
125. It is good to have charge accounts		-0.66
11. I buy many things with a credit card or charge card		-0.61
58. To buy anything, other than a house or a car, on credit is unwise		0.61
40. I like to pay cash for everything I buy		0.52
116. Our family is too heavily in debt today		-0.48
27. In the past year we have borrowed money from a bank or a finance company		-0.39

Table 86
Pilot Life Style Study
Factor XI: QUALITY SHOPPER

Variables	Percent of Total Variance Accounted For: 2.0	Loadings
60. When buying appliances, it pays to get the best model even though it is more expensive		0.66
68. I keep away from brands I have never heard of		0.49
75. I usually watch the advertisements for announcements of sales		-0.47
92. I hate to take pills		0.44
12. I am happier now than I ever was before		0.35

Table 87
Pilot Life Style Study
Factor XII: POLITICALLY CONSCIOUS

Variables	Percent of Total Variance Accounted For: 2.0	Loadings
97. I like television news programs		0.55
49. An important part of my life and activities is dressing smartly		-0.51
19. I spend money on myself that I should spend on my family		-0.42
16. The government in Washington is too big and powerful		0.40

Table 88
Pilot Life Style Study
Factor XIII: ADVERTISING CONSCIOUS

Variables	Percent of Total Variance Accounted For: 2.0	Loadings
28. There is too much advertising on television		-0.60
5. Information I get about a product from a friend is better than what I get from advertising		-0.57
130. I watch more TV than I should		0.49
115. I look at the advertising in magazines almost as much as I look at the pictures or read the stories		0.40

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