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THE RELATIVE INFLUENCE OF SOCIAL STRUCTURE AND FAMILY ROLE VARIABLES ON VOLUNTARY ASSOCIATION PARTICIPATION OF MEN AND WOMEN

BY

BARBARA R. KEATING

Submitted in partial fulfillment of the requirements
for the Master of Arts degree in
the Department of Sociology
University of Nebraska at Omaha
May, 1979

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Accepted by the faculty of the Department of Sociology, University of Nebraska at Omaha, in partial fulfillment of the requirements for the Master of Arts degree.

_____
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April 18, 1979

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B.R.K.

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CHAPTER I

INTRODUCTION

Sociology has long claimed to be an objective, value free science (Hinkle and Hinkle, 1954; Bates, 1967; Caplow, 1971). The research process is expected to be unaffected by the personal values, hopes, and prejudices of the researcher. Superficially, such claims can simply refer to professional ethics in gathering, analyzing, and presenting data. Violations at this level, albeit unintentional, are usually sufficiently manifest to be detected in professional review and replication attempts.

However, there have been a number of objections to sociology's claim of objectivity aimed at provoking a deeper level of awareness. In recent years, critical theorists have given considerable emphasis to identifying ideological biases in sociological research. Blacks have simply said that white sociology is inadequate (Ladner, 1973). Feminists have now started to identify and question the male bias in sociology (D.E. Smith, 1974) Such accusations require the discipline to seek out and eliminate the covert sources of bias about which researchers may not yet be aware. Sociology's pursuit of an objective comprehension of reality necessitates an examination of its conceptions, theories, and methods.

The conceptual, theoretical and methodological development in sociology does not have a history of steady, even progression. Just as science as a whole has not developed in an even fashion (Kuhn, 1970), sociology's strengths and weaknesses are differentially

distributed among its various areas of specialization. Few areas are well developed in all three facets with marriage and the family more so thanmost. Some areas, such as socialization, are relatively well developed conceptually and theoretically but weak methodologically. Others, such as voluntary associations, possess many empirical generalizations but are limited by lack of theory.

Unfortunately, this differential emphasis minimizes the importance of the reciprocal and interdependent relationship between theory and methods. While concepts identify and define the variables under study, theory attempts to explain the relationships between the concepts. Methods provide data based tests of the hypotheses derived from theory allowing for theoretical refinement and development. Sociology's methodology continues to expand at an ever increasing rate showing the inadequacy of previous techniques. Advances in methodology, however, have not always been tied into similar developments in theory. Therefore, sociologists must continually examine both their theory and methods simultaneously. This dual emphasis on both theory and methods provides a means for identifying and correcting bias produced by incorrect or inadequate assumptions.

One type of bias that needs to be examined is sex bias. The origin of such bias lies outside the discipline of sociology and the world of social science. The origin is to be found in society itself which differentially defines male and female.

In fact, one of the laments of the women's movement is that men are considered the norm and women are somehow deviant from it.

Furthermore, femininity has been defined as the lack of masculinity (Bem, 1977). Perceptions of mental health are such that the mentally healthy female adult is seen as the polar opposite of the mentally healthy male adult and the non-sex-identified mentally healthy adult (Broverman, et al, 1970; Neulinger, 1968). Sex role stereotypes are clearly defined by college students and both sexes see the masculine traits as more desirable (Rosenkrantz, et al , 1968; Broverman, et al , 1972).

This perspective has been prevalent in the social sciences through which stereotypes are given an aura of validity. Chesler (1971:746) indicts psychology by saying:

> Like all sciences and valuations, the psychology of women has hitherto been considered only from the point of view of men. It is inevitable that the man's position of advantage should cause objective validity to be attributed to his subjective, affective relations to women.

Other disciplines are likewise permeated with unempirical assumptions and explanations that can be labeled as sexism which has been defined by Bernard as quoted in Gornick and Moran (1971:xxv) as:

> the unconscious, taken-for-granted, assumed, unquestioned, unexplained, unchallenged acceptance of the belief that the world as it looks to men is the only world, that the way of dealing with it which men have created is the only way, that the values which men have evolved are the only ones...that what men think about what women are like is the only way to think about what women are like.

This problem is also found in sociology and has been examined from sociology of knowledge perspective by Dorothy Smith who asks how a woman's point of view would change sociology. Although she assumes that domestic interests would become more prominent as evaluations of the world changed, she feels that merely including what has been excluded is inadequate because "that merely extends the authority of

the existing sociological procedures and makes of a woman's sociology an addendum" (Smith, 1974: 7). Rather, we must examine how the very building blocks of sociology, its methods and theories, have been dependent on the male defined universe.

According to Smith, there are two worlds of experience, one for men and another for women. They each provide a base of knowledge, but the male world is dominant defining both society and sociology. Smith (1974:11, 13) contends that a discipline so defined provides an incomplete view:

> Women's perspective discredits sociology's claim to constitute an objective knowledge independent of the sociologist's situation....If sociology cannot avoid being situated, then sociology should take that as a beginning and build it into its methodological and theoretical strategies.
>
> Women's direct experience places her a step back where we can recognize the uneasiness that comes in sociology from its claim to be about the world we live in and its failure to account for or even describe its actual features as we find them in living them.

Therefore, we need to examine the world of experience as lived by women. Women's lives are less cumulative as they encounter more contingencies capable of altering basic lifestyles. For example, the birth of a child frequently interrupts the mother's career but not the father's. The multiple roles fulfilled by the wife-mother figure necessitates the development of the ability to hold the "threads and shreds of a number of lines of action simultaneously while pursuing none continuously and consistently" (Smith, 1977:19).

The writer concurs with Smith's ideas but feels that the problem goes beyond the omission of women's perspective. Sex has been one of the basic classifications in sociological literature and has been

consistently shown to be a significantly differentiating factor in a variety of areas of study. Few studies, however, have investigated the factors underlying these differences. One of the ways to examine sex bias is to explore these underlying differences. Sex may be an important differentiating variables because men and women experience the domestic and external worlds differently.

Specific testable hypotheses can be developed to test the relation-between sex and domestic and external world experiences. The writer feels there is a need to examine the relationship of the two worlds. The domestic world may be of primary importance to a woman but she is a member of the external male-defined and male-dominated world as well. Given the domestic world's perceived unimportance, its effects on the external world are largely ignored except in the sociology of family literature. By arbitrarily limiting the study of the domestic world to this area, its importance and influence on the extra domestic world is largely ignored.

An area which leand itself to an examination of the above issues is the study of social participation. Social participation is the reciprocal interaction between individuals and the larger groups of which they are members. Social participation has been variously defined as the number of neighbors, friends and relatives (Teele, 1965). A review of the literature reveals that social participation is frequently defined as membership in voluntary associations.

The area of voluntary associations provides an appropriate dependent variable when investigating the underlying factors associated with sex. It is an accepted measure of social participation and provides external world activity even for the full-time homemakers. The literature consistently reports sex differences in voluntary association activity. Few studies, however, have examined the underlying factors that produce these differences.

CHAPTER II

THEORY

While sex is a standard variable in sociological literature, there are many ways in which it is conceptually inadequate. For example, the domestic and external worlds of experience may operate differentially for men and women. A model needs to be developed that will evaluate the relative importance of the two worlds for men and women. The relationships between the domestic and external worlds also need to be examined. This model would also provide the opportunity to examine the concept of sex as a variable.

To develop this model, social participation has been chosen as the dependent concept and defined as voluntary association affiliation and participation. The domestic and external worlds in the model are defined as sets of family role and social structure variables, respectively. These definitions allow an examination of the differences between male and female behavior patterns in voluntary organization activity.

Many studies have shown that women are less likely to be affiliated with formal voluntary associations than men (Babchuk and Thompson, 1962; Babchuk and Booth, 1969; Booth, 1972; Cutler, 1976). A number of traits, however, characterize those who are affiliated with voluntary associations regardless of gender. For example, those with higher socio-economic status are more likely to belong to voluntary associations (Foskett, 1955; Wright and Hyman, 1958; Moore, 1961; Erbem 1964; Smith and Freeman, 1972; Tomeh, 1973). Komarovsky

(1946) also found that sex differences in voluntary association participation are greatest at the bottom of the occupational scale, diminish higher up and eventually disappear.

Babchuk and Booth (1969) concluded that men are more likely to be affiliated, have more multiple memberships and belong to a greater variety of organizations than women. They also found, however, that men and women are equally involved in civic-political groups with men belonging to the more prestigious organizations and exercising more power through them. Babchuk and Booth (1969:34) also found that women "employed full-time and committed to a job are as inclined to join work related voluntary groups and to remain in them as their male counterparts and probably for the same reasons" although they become involved later in life.

The social structure and family role factors involved in the affiliation and participation patterns of men and women need to be examined. Not only should we study the characteristics that differentiate members from nonmembers but also the relative influence of the different factors. Women's social participation patterns, like men's, are influenced by a number of social structural factors.

While the social structural variables have long been used as independent variables in the study of voluntary associations, the family role variables, however, are seen only infrequently. Nevertheless, these variables might explain the episodic, contingency inflicted, and discontinuous characteristics of women's lives as

described by Smith (1977). Her suggestion that sociologists start with the everyday ordinary lives of women requires a closer examination of these family role variables and their effect on social phenomena. By comparing the effects of social structure variables and family role variables, a more adequate theory can be developed for explaining the behavior of both men and women.

The writer feels that family role obligations play an important part in social participation patterns, especially for women. Studies have shown that women become involved later in life than men implying that such involvement at this time is due to greater freedom from mother role obligations (Moore, 1961; Babchuk and Booth, 1969). Harry (1970) more specifically found that membership and attendance in outdoor leisure associations drop off for wives but not for husbands with children.

The differential influence of the social structure and family role factors may explain the differences between men and women in voluntary association activity. By integrating these divergent variables into a more comprehensive theory, the biased nature of the discipline could be diminished. Smith's idea that the external world is inappropriately superimposed on the lives of women and Chafetz's contention that sex in itself is an inadequate concept are testable. As in all research studies, the researcher faces the problem of simplifying the complexity of the social phenomenon under study to a testable model (See Figure 1).

The family role variables were chosen to represent role obligations as experienced by the subject. Major factors in determining such

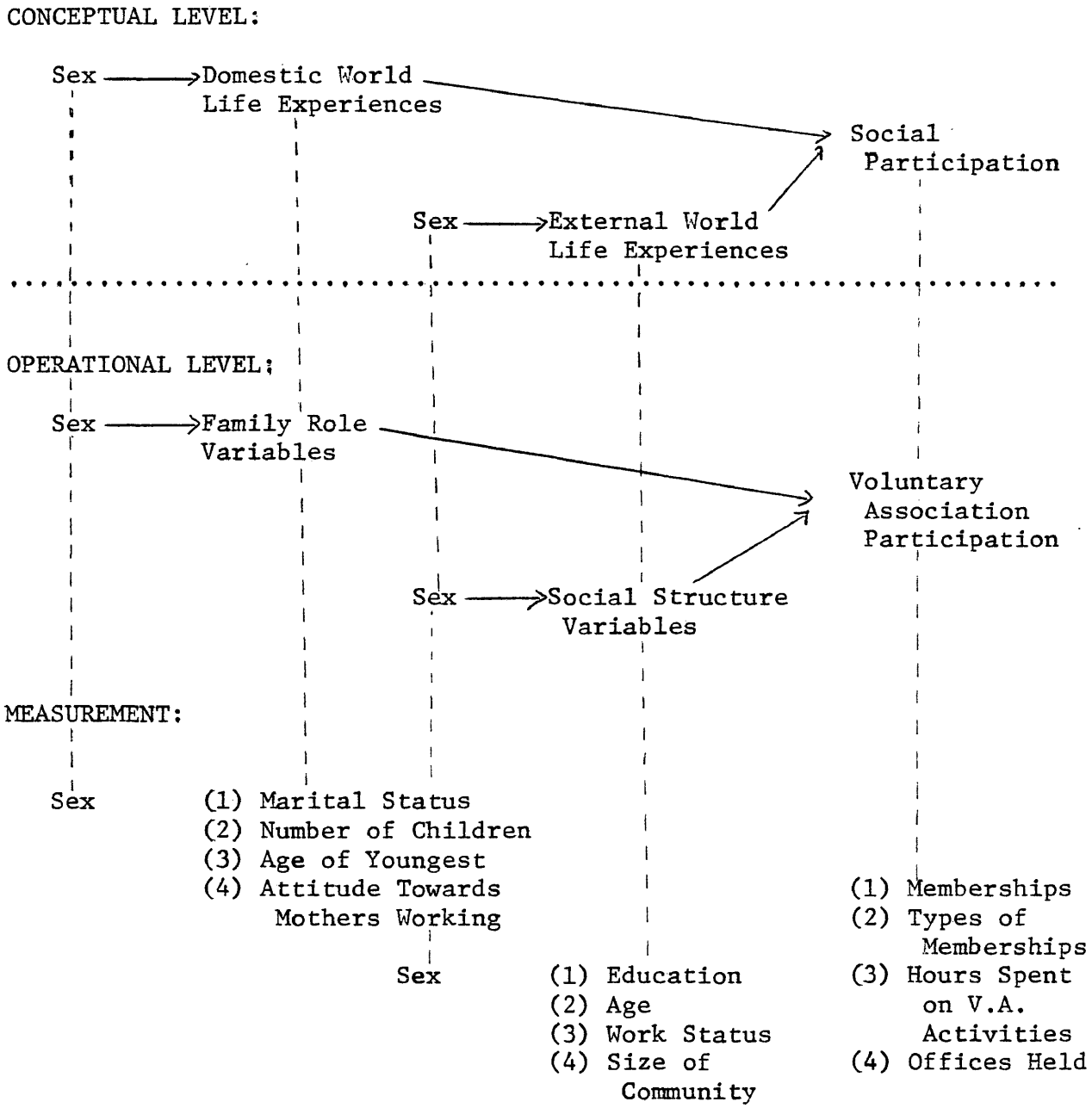

Figure 1. Model representing the relationship of sex, domestic and external world experiences as they affect social participation

role obligations are marital status, the number of children, and the ages of the children. The age of the youngest child is especially important because it represents the conclusion of ongoing parental obligations. Another important family role variable is the attitude towards maternal role obligations, that is, whether or not they should take precedence over outside activities.

The social structural variables were chosen for the study on the basis of their importance in the voluntary association literature. Given the great consistency of education in predicting voluntary association participation, the writer has decided to use it as the socio-economic indicator in this analysis. Education has been shown to be more important than income in voluntary association participation. The relationship of income and participation is significant only if education is below the ninth grade level (Foskett, 1955). Occupational prestige as an indicator of socio-economic status has not been used because of its general inapplicability for women (Williams and St. Peter, 1977). Work status, however, is included. Age and community size are additional social structural variables included in the analysis.

Voluntary association participation is measured by the number of voluntary association memberships held by the subject, the different types of organizations of which the subjects are members, the hours the subjects spent on voluntary association activities a month, and the offices or committee chairpersonships held by the subjects. This multi-definitional approach is being used to overcome some of the criticisms encountered in using only the number of voluntary

association memberships. Using the number of types of voluntary associations addresses the problem of overlapping memberships, that is, multiple memberships in related organizations such as national, regional and state professional organizations. Both the number of hours and the number of offices held are measures of degree of participation designed to compensate for misleading inactive or nominal memberships.

The dependent variable, voluntary association participation, may be considered an unidimensional concept of which the number of memberships, number of types of organizations, number of offices held, and the number of hours spent on organizational activity are indicators. However, the independent variables, both the social structural variables and the family role variables, do not share this characteristic and the measures defined as such cannot be considered unidimensional indicators. Marital status, the number of children, the age of the youngest child, attitudes towards mothers working, education, age, work status, and the size of community are separate independent variables grouped as either social structural or family role variables simply to indicate their type.

Four hypotheses were developed from the model that would support the ideas of Smith. They are:

(1) For women, family role variables will have a significantly stronger relationship with voluntary association participation than social structure variables.

(2) For men, social structure variables will have a significantly stronger relationship with voluntary association participation than family role variables.

(3) Family role variables will have a significantly stronger relationship with voluntary association participation for women than men.

(4) Social structure variables will have a significantly stronger relationship with voluntary association participation for men than women.

Hypotheses numbered one and two are comparisons of the relative influence of family role and social structure variables within each sex. Hypotheses numbered three and four are concerned with the explanatory power of each set of variables for each sex, comparing the differences between the sexes.

CHAPTER III

REVIEW OF LITERATURE

The area of voluntary associations is one of the lesser developed in sociology. Although many empirical generalizations of concrete variables are available in the extensive literature, few are tied to a more abstract theory. It is methodologically limited by questionable measurement, small samples and inadequate statistical techniques although there have been some recent improvements. Nevertheless, the literature does provide a number of empirical generalizations. Each of the nine independent variables will be discussed separately.

Sex

Many studies have shown that women are less likely to be affiliated with formal voluntary associations than men. In Scott's (1957:319-320) community study of 232 residents of Bennington, Vermont, 75% of the men and 56% of the women were affiliated with voluntary associations. The men also averaged more memberships although the women attended meetings more frequently. Babchuk and Thompson (1962:652) found more affiliations and more multiple memberships among males in their 1962 study study of 120 Black adults. Cutler (1976:50) reported that males had a higher rate of affiliation in all age groups even after controlling for education and income in two national samples of 3,949 adults. Among the fifty working class families interviewed by Dotson (1955:688) 75% of the men and 80% of the women belonged to no voluntary associations.

Curtis (1971:875-876) found that the generalizations regarding affiliations and multiple memberships held cross nationally although the male-female differences are much greater in Great Britain, Germany, Italy, and Mexico than in the United States and Canada. In addition, when union membership was excluded he found no sex differences in Canada and only a small difference in the United States in affiliation. Other studies, however, indicate that the social phenomenon of male-female differences in voluntary association affiliation and participation are more complex than the above studies indicate. Komarovsky's (1946:695) study of 2,223 New York City employees found the generalization of males having higher affiliation rates held only for the working class in which 51% of the men and only 13% of the women participate. In the white collar and professional classes of people thirty years and older, women were more active than the men. It should be noted, however, that all female respondents were employed which may not be representative of all women.

In a four-year panel study of 1500 people representing the population of Nebraska between the ages of 21 and 69, Babchuk and Booth (1969:37-43) found that a greater proportion of men than women were both affiliated with associations (83% and 78%, respectively) and held multiple memberships. Men, twenty-nine years and older, however, were less stable and more variable in their memberships over the four years. Young women between 21 and 29 were more likely than the corresponding men to become members as well as add to, drop or change existing memberships. Fifty-eight percent of the men and 24% of the women of the panel belonged to job related groups; 34% of the men and

15% of the women belonged to fraternal-service organizations, and men were four times as likely as women to belong to instrumental boards. A greater proportion of women than men, however, belonged to recreational groups and church-related groups. Youth-serving groups and civic-political groups experienced equal representation by men and women.

Booth's (1972:183, 188-189) study of 800 non-institutionalized adults forty-five years and older in two Midwestern urban areas also suggested a complex pattern to be found in male-female affiliation patterns. Men exceeded women in the number of voluntary association memberships but not in time commitment to voluntary association activities. Booth found differential affiliation patterns regarding voluntary associations similar to those in the Babchuk and Booth longitudinal study. Forty-four percent of the men and 13% of the women belonged to instrumental organizations. Men also belonged to more instrumental-expressive associations although more women belonged to expressive organizations than men, 61% and 53%, respectively. Also, sexually exclusive associations that were generally of the expressive type experienced similar rates of participation by men and women.

Hausknecht's (1962:31-33) examination of two national probability samples showed that men and women join voluntary associations in equal numbers and that controlling for class or education does not significantly change this. In both samples women participated slightly more than men in the low income groups but this relationship held only in the high income groups of the National Opinion Research Center

sample while the opposite was true in the American Institute of Public Opinion sample. The size of the community also affected differential participation rates by men and women. Higher participation rates for men were found onlu in the largest urban category in the American Institute of Public Opinion sample. There was no difference between the sexes found in the National Opinion Research Center sample in the metropolitan category. In the other less urban and rural nonfarm categories of both sample, women maintained higher affiliation rates.

Social Structure Variables

Age

Generally, the realtionship between age and voluntary association membership has been shown to be curvilinear. Hausknecht's (1962:33) national samples produced such a distribution slightly skewed toward the upper ranges. Payne et al (1972:210) documented consistency in the literature regarding these findings when age is considered alone. Tomeh (1973:98) concluded the same although she noted some ambiguity in age boundaries and the influende of sex. Eitzen (1970:87), however, noted that although the mean number distribution of memberships suggests a curvilinear relationship, it is not significant in his 1967 sample of 190 middle class women in Kansas.

Controlling for the correlates of age could diminish the reputed effects. Unlike the curvilinear pattern generally noted, Booth (1972:183) pointed out that among those forty-five years and older in Lincoln and Omaha, Nebraska, age did not correlate with diminished participation for women as it did for men. Babchuk and Booth's (1969:35) longitudinal study also revealed that much of the variation

attributed to age is actually due to sex. The curvilinear relationship reported by Hausknecht (1962:33-34) when he was looking at age alone becomes linear when examined within each income level and education level. He also reported that while men have higher rates of membership under age forty, the reverse is true in the higher age groups.

Cutler (1976:48) specifically examined age differences in voluntary associations. Using Multiple Classification Analysis (MCA) on the American National Education Study (N=2,597) and the 1974 National Opinion Research Center (N=1,352), he examined the effects of the "socioeconomic compositional differences" and found that removing the effects of income and education significantly changed the pattern for age from a curvilinear distribution to one that is "nearly linear".

Education.

Wright and Hyman's (1958:294) national sample survey revealed a direct positive relationship between voluntary association membership and socio-economic status as measured through a variety of indicators including income, occupation, home ownership, interviewer's rating of level of living and education. Hausknecht's (1962:17-20) analysis of two additional national surveys confirmed the positive relationship of voluntary association affiliation with education, income and socio-economic status. A number of city-wide surveys have reported the same including Detroit, Michigan (N=749) in regards to education, income, occupation and socio-economic status (Axelrod, 1956:17-18), Lincoln and Omaha, Nebraska (N=800) concerning

occupation (Booth, 1972:189) and Bennington, Vermont (N=232) concerning education (Scott, 1957:320).

Literature reviews by Smith and Freedman (1972) and Tomeh (1973) have shown these findings to be consistent. Curtis (1971) demonstrated that they hold cross-nationally in five other democratic societies.

Residence

The effect of community size on voluntary association activity has not been consistent in the literature (Tomeh, 1973). In Eitzen's (1970) Kansas study middle-class women belong to significantly fewer associations in small rural towns than in middle and larger sized cities. He offered two explanations: first, smaller towns have fewer formal voluntary associations both in number and in types of organizations; second, traditionally there is less emphasis on formal associations in rural than urban society.

Babchuk and Booth's (1969) contingency analysis of their longitudinal study suggested that there was no relationship between community size and membership rates. Lockwood's (1976) Multiple Classification Analysis of the same data, however, produced a higher participation rate in the smaller communities. Such a finding indicates the importance of continuing developments in methods and statistical analysis as well as underlining the importance of controlling for correlated variables.

Hausknecht's (1962) bivariate analyses control for income, education and occupation. The American Institute of Public Opinion

sample produced the higher rates of membership in the smaller urban areas although the nonurban areas still maintained higher rates than the larger urban areas. He provides an interesting contrast to Eitzen's explanations with the suggestion that a larger urban area offers many leisure opportunities not involving formal association membership while the smaller community has fewer non-association means of fulfilling similar interests. He also suggests that the population density of a large urban area provides a greater probability of knowing people similar to yourself without resorting to voluntary associations. Furthermore, smaller towns maintain a sense of "potency" so that individuals are encouraged to join formal groups because of the greater feeling that action taken by individuals or groups will produce desired results.

Work Status

Research on voluntary association affiliation and participation often includes occupation both as an indicator of socio-economic status and as a variable in itself. The positive relationship between occupational status and rates of membership has been often confirmed (Payne et al, 1972). Hausknecht (1962) reported a linear relationship with five occupational status classifications. On the other hand, no clear relationship between occupational mobility and participation has been established (Payne et al , 1972; Tomeh, 1974).

Work status can be defined as a person being employed outside the home on a full or part-time basis. Work status has rarely been used as a variable. Booth (1972) found that unemployed men were less

active than employed men in both instrumental and expressive groups. Unemployment for women is related to decreased participation in instrumental groups only and does not affect affiliation in expressive groups.

Work status is an important variable for examining social structure variables for women. Fifty-eight percent of the men, but only twenty-four percent of the women in the Babchuck and Booth (1969) study were affiliated with job related organizations with women generally becoming involved later in life. This finding may be attributed to women's lack of employment and to their practice of entering or re-entering the job market later in life.

Family Role Variables

Marital Status

Although there is some evidence of change, marriage has traditionally been viewed as normative or even as an indicator of personal adjustment and societal integration. This integration may be partially manifested through social participation, especially voluntary associations. The literature consistently reports that married people have higher rates of membership than the unmarried, whether single, widowed or divorced (Payne et al, 1972; Scott, 1957; Babchuk and Booth, 1969).

Hausknecht's (1962:35) national sample agreed with this generalization with rates of 57%, 53%, 46%, and 44% for the married, widowed, divorced and single people, respectively. Curtis' (1971) cross-national comparison produced essentially the same results, although the married-unmarried differences were less pronounced in

countries other than the United States and Canada. Although Babchuk and Thompson's (1962) black sample is in agreement with the married population having a higher proportion of those with at least one affiliation, it was the unmarried group that maintained a higher proportion having four or more.

Booth (1972) found that the effect of marital status on membership rates is greater for men than women.

Children

Family roles seem to affect voluntary association membership. Anderson's (1943a) study of rural families produced Chapin Participation Score correlations from .68 to .74 between family members suggesting that such participation is a family characteristic. In a later article, Anderson (1943b) concluded that the mother figure is most likely to influence such participation. The literature concerning the relationship between family factors and voluntary associations, however, is relatively sparse compared to that found for social structure variables. In addition, the findings are inconsistent.

Generally, the presence of children encourages formal organization affiliation (Wright and Hyman, 1958; Payne et al , 1972) but the number and age of children are also very important. Harry (1970) noted a decrease in membership and attendance in outdoor leisure associations for mothers but not fathers of young children. Also, having more than two children seems to decrease membership rates (Payne et al , 1972; Scott, 1957).

Age of Children

The effects of children are sometimes implied in the literature concerning life cycle stages. For example, Knoke and Thomsen (1977) reported a curvilinear relationship between family life cycle and voluntary association membership even with race, sex and education controlled. Types of organization joined also differ by stage of the family life cycle as certain stages are conducive to certain types of organizations.

Other than these implications, age of children is rarely mentioned in voluntary association studies. Payne et al (1972) has reported higher membership rates when all children are of school age. The age of the youngest child is an especially crucial factor. The age of the youngest child generally determines a woman's life cycle stage in relationship to her children as well as a major part of her responsibilities and freedom in relationship to her family.

Attitude Toward Mothers Working

The writer has been unable to locate a single study of attitudes toward family obligations and voluntary association membership. Such attitudes may affect associational membership. For example, these attitudes may delay organizational involvement. Babchuk and Booth (1969) attributed such a delay to family life cycle. While the family may also act as a positive influence for P.T.A. or other youth serving organizations, it may at the same time serve as a negative force for other organizations. Individual attitudes toward

such activity, however, may be even more important. Stryker (1968) commented that family role obligations will take precedence over extra-familial obligations to the extent that family identity ranks higher in a salience hierarchy of roles and that commitment to the family is more intense.

The relationship between family role obligations and voluntary associations is rich with research potential. Unfortunately, this research can only use "attitude towards mothers working" as an indicator of family role salience.

Conclusion

This study attempts to respond to some of the theoretical and methodological inadequacies of the voluntary association literature. Voluntary association participation is identified with the broader concept of social participation to allow greater generalization of the findings. This research also compares the influence of the domestic and external worlds on social participation and analyzes their influence for each sex. Finally, this study examines the adequacy of sex as a sociological variable by analyzing other independent variables that are presumed to co-vary with sex.

Methodologically, the study has several advantages over many previous studies. The research involves a very adequate sample and multiple measures of voluntary association participation with aided recall. In addition, the analytical technique to be used, Multiple Classification Analysis, has the capacity to control for correlated independent variables, a procedure that has come into recent use in

the voluntary association literature and has proven to be important (McPherson, 1977).

CHAPTER IV

METHODS AND DATA COLLECTION

Secondary analysis has many benefits and has been defined as the "extraction of knowledge on topics other than those which were the focus of the original surveys" (Hyman, 1972:1). It provides maximum utilization and conservation of money, time and personnel. It reduces the number of "intrusions and impositions" into the lives of the subjects and can provide quality research with well developed items and large samples that may otherwise be unavailable to the researcher (Hyman, 1972).[1]

Hyman (1972) asserts that trend studies should be started today to develop social science archives because they will influence the research potential of the future. One example is the Nebraska Annual Social Indicators Survey (NASIS) conducted by the Bureau of Sociological Research at the University of Nebraska--Lincoln.

The 1977 NASIS study provided the data used in this analysis. The population consisted of the non-institutionalized persons in households residing in the State of Nebraska during the survey and excluded those under 18, in custodial institutions or on military reservations and transient visitors. Personal and telephone interviews comprised one-third and two-thirds of the sample, respectively. Consequently, there were two sampling designs. Random

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[1]A more comprehensive discussion of secondary analysis including its relation to theory is presented in Appendix A.

Digit Dialing (RDD), used for the telephone interviews, allowed each number an equal probability of selection. Multistage stratified area probability sampling was used to select households for the personal interviews. Respondent selection tables randomized the choice of respondents in each of the chosen households. Professional interviewers conducted the interviews.

A total of 1867 usable interviews were obtained including 1263 telephone interviews, 569 personal interviews and 35 "type 13" interviews. Type 13 interviews were those conducted in the personal interview sample areas with high refusal or non-contact rates.[2] The data were stored in a SPSS archive file. A subfile was created with those items representing the variables under study.

The chosen social structure variables are age, education, residence, and work status. Age was originally measured using interview item #4 which asked the person's age on his/her last birthday. For this study, age was recoded into five categories: (1) 18-29 years, (2) 30-49 years, (3) 50-65 years, (4) 66-75 years, (5) 76 years and older.

Education was measured with item #6, which asked "How many years of schooling has this person completed?" Education was also recoded into five categories: (1) less than 12 years, (2) 12 years, (3) 13-15 years, (4) 16 years, (5) 17 or more years.

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[2]A detailed presentation of NASIS, its origin, content, and procedures is given in Appendix B.

Item #9 on the questionnaire asked if the respondent lived in a town or city or out in the country, and the name of the community. The populations of these communities were included on the master file. The residence variable was then derived from these population figures and coded in five categories: (1) rural farm, (2) rural non-farm, (3) Nebraska city or town other than Lincoln or Omaha, (4) Lincoln, (5) Omaha.

The respondent's work status was determined by item #25, "Last week were you working full-time, part-time, going to school, keeping house or what?" The master file contained this information coded into eight categories: (1) work full-time, (2) work part-time, (3) work but temporarily ill, (4) unemployed, (5) retired, (6) in school, (7) keeping house, (8) other.

The family role variables for this study are marital status, the number of children, the age of the youngest child, and the attitude toward mothers working. Item #5 asked if the person is married, never married, divorced, widowed or separated with the information coded into these categories. For this study the divorced and separated statuses were recoded into one category, a common classification procedure.

Item #33 requested the number of children the respondent has ever had and their ages. The writer recoded those with three or more children into one category. The age of the youngest child was recoded into five categories: (1) preschool, 0-4 years, (2) elementary, 5-12 years, (3) junior high, 13-15 years, (4) senior high, 16-18 years, (5) adult, 18 years or older.

The respondents' attitude toward mothers working was defined as their response to item #30. It asked: "Assuming some arrangement could be made to care for the children, are you in favor of mothers working outside the home if they want to, even if their husbands make enough to support the family?"

The dependent variable, voluntary association affiliation and participation, was produced by item #42. Respondents were asked to list their organization memberships with the use of aided recall. For each organization they were asked how long they had been a member, if they had ever held an office or committee chair, how many hours a month they spent on organizational activities, whether the number of hours was the same, greater or less than they were two years ago, and how many people were members of the organization. The total numbers of organizations, types of organizations, hours and offices were computed for the subfile.

Due to SPSS limitations in Multiple Classification Analysis in which no more than five categorical and five covariate variables can be used in a single analysis, the predictor variables were computed and recoded into both categorical and interval or dichotomous measurements so that each variable could be used at either level.

Multiple Classification Analysis (MCA) has been defined as "a technique for examining the interrelationships between several predictor variables and a dependent variable within the context of an additive model." (Andrews, et al , 1975:1). MCA provides a measure of the relationship of an independent variable with a dependent variable while

simultaneously controlling for all other independent variables. The feature of particular importance is its potential to "examine the pattern of changes in the effects of a given variable as we introduce more variables as controls" (Nie et al , 1975:409). This feature allows MCA to present the effects of an independent variable on the dependent variable both before and after taking the other variables into account.

Andrew et al , (1975:39,50) states that Multiple Classification Analysis is both a "computerized version of ... long known techniques for analysis of variance" used for data with unequal cell sizes and a multiple regression technique using dummy variables. MCA's major advantage is that it was specifically designed to handle some of the problems found in these techniques. Unlike multiple regression, MCA does not require interval measurement of the independent variables so it can be used with nominal predictor variables. The dependent variable, however, should be interval or dichotomous. MCA was developed for use with correlated predictors which is of particular concern when using analysis of variance (Andrews , et al, 1975:1-3). Finally, MCA does not assume a linear relationship as required by both multiple regression and analysis of variance.

Mathematically, MCA simply computes the mean of the dependent variable measured within each category of the independent variable and compares it to the grand mean which is computed across all categories. The means within each category are printed as deviation from the grand mean three times. The first are the "unadjusted deviations" simply

presenting the deviations without controlling for the other independent variables. The second column lists the "adjusted for independents" deviations in which the effects of the other factors or categorical independent variables are controlled. The third set of deviations are those laveled "adjusted for independents and covariates" for which both the factors and covariates (interval level independent variables) are controlled.

The MCA computer program printout includes both eta and beta coefficients. The eta coefficients are associated with the unadjusted deviations and the beta coefficients are associated with the adjusted deviations. They both assess the relationship between the predictor and dependent variables. The eta is concerned with the simple bivariate relationship while the beta is an estimate of the relationship when the other independent variables are held constant (Andrews, et al , 1975:34).

The betas were especially important for this analysis because the rank order of the betas indicates the relative importance of the independent variables which allows us to test hypotheses one and two.

The multiple R assesses the overall relationship and the R squared "represents the proportion of variation... explained by the additive effects of the independents and covariates" (Nie et al , 1975:410). Comparison of the multiple R squares provided the test for hypotheses three and four.[3]

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[3]A more extensive discussion of Multiple Classification Analysis including the statistical formulas is presented in Appendix C.

CHAPTER V

DATA ANALYSIS AND FINDINGS

A series of Multiple Classification Analyses (MCA) were used to test each hypothesis. An additional exploratory analysis of some of the data was also conducted. Therefore, this chapter is divided into two sections. The first presents the initial results produced in a confirmatory mode of analysis and the second discusses the exploratory findings.

Confirmatory

Hypothesis 1

The first hypothesis stated that "for women family role variables will have a significantly stronger relationship with voluntary association participation than social structure variables." This hypothesis required a series of MCA runs using only the female cases. The influence of each family role variable was compared to that of the social structure variables while controlling for all other predictor variables. The betas signify this relative influence by indicating their rank order of importance (See Table 1).

Clearly, the hypothesis is not supported. At no time in this sample does the influence of a family role variable exceed the influence of any of the four social structural variables for three of the dependent variable measures. Only one comparison in the fourth dependent variable measure concurred with the prediction. The age of the youngest child is slightly more important than the age of the respondent in determining the number of hours spent on organizational

TABLE 1

RELATIVE INFLUENCE OF FAMILY ROLE VARIABLES
AND SOCIAL STRUCTURE VARIABLES FOR WOMEN

Voluntary Association Participation	Family Role Variables				Social Structure Variables			
	Marital Status	No. of Children	Age of Youngest	Attitude Toward Mothers Working	Age	Education	Residence	Work Status
Number of Memberships	.14a .03b				.19 .15	.15	.14	.15
		.14 .07			.28 .35	.36	.35	.36
			.15 .06		.16 .17	.17	.18	.18
				.02 .01	.22 .19	.18	.19	.19
Number of Types of Organizations	.15 .04				.17 .12	.10	.11	.11
		.14 .09			.27 .34	.35	.34	.35
			.13 .05		.21 .22	.22	.22	.22
				.02 .02	.21 .17	.17	.17	.17

[a]MCA Etas: Top number listed

[b]MCA Betas: Second number listed

TABLE 1--Continued

Voluntary Association Participation	Family Role Variables				Social Structure Variables			
	Marital Status	No. of Children	Age of Youngest	Attitude Toward Mothers Working	Age	Education	Residence	Work Status
Hours Per Month on V.A. Activities	.05 .07				.12 .11	.10	.08	.11
		.05 .03			.16 .19	.19	.18	.19
			.14 .11		.12 .13	.13	.13	.13
				.00 .02	.17 .16	.16	.16	.16
Number of Offices Held	.16 .01				.24 .25	.26	.26	.25
		.18 .07			.16 .29	.29	.29	.29
			.17 .10		.25 .23	.23	.23	.23
				.11 .04	.24 .18	.17	.18	.18

activity per month. The age of the youngest child, however, is still less important than the other social structural variables.

Education, on the other hand, is consistently the most important factor. It was also highly significant at the .0005 level.

Hypothesis 2

Hypothesis 2 states that, for men, social structure variables will have a significantly stronger relationship with voluntary association participation than family role variables. A series of MCA runs on the male cases allowed comparison of each of the social structure variables with the family role variables while controlling for all other predictor variables. Again, this analysis was accomplished by comparing the betas (See Table 2).

The results are less consistent than the figures for women and are more surprising. Education is the only social structure variable that followed the predicted pattern and then for only three of the four dependent variable measures. For the remaining measure, the number of hours spent on organizational activity per month, education followed both the number of children and the age of the youngest child in importance. The remaining social structure variables ranked no better than second lowest in influence, only slightly more important than marital status. In three comparisons, the social structure variables ranked lowest in influence.

Age, residence, and work status are less important in determining voluntary association participation for men than those variables defined as family role variables -- the number of children, the age of

TABLE 2

RELATIVE INFLUENCE OF SOCIAL STRUCTURE VARIABLES AND FAMILY ROLE VARIABLES FOR MEN

Voluntary Association Participation	Social Structure Variables				Family Role Variables			
	Age	Education	Residence	Work Status	Marital Status	Number of Children	Age of Youngest	Attitude Toward Mothers Working
Number of Memberships	.22[a] .08[b]				.19 .06	.07	.06	06
		.28 .30			.20 .14	.15	.16	.15
			.05 .07		.18 .09	.11	.10	.10
				.18 .07	.15 .17	.18	.18	.18
Number of Types of Organizations	.23 .05				.19 .06	.07	.06	.06
		.22 .24			.22 .17	.18	.18	.18
			.04 .07		.22 .13	.15	.14	.14
				.17 .08	.17 .20	.20	.20	.20

[a]MCA Etas: Top number listed

[b]MCA Betas: Second number listed

TABLE 2--Continued

Voluntary Association Participation	Social Structure Variables					Family Role Variables			
	Age	Education	Residence	Work Status		Marital Status	No. of Children	Age of Youngest	Attitude toward Mothers Working
Hours per Month on V.A. Activities	.15 .08					.12 .07	.06	.06	.06
		.17 .15				.15 .23	.24	.25	.24
			.09 .07			.13 .15	.17	.17	.16
				.07 .02		.09 .13	.14	.14	.14
Number of Offices Held	.27 .12					.19 .11	.11	.11	.10
		.16 .25				.26 .16	.18	.18	.18
			.12 .15			.25 .15	.18	.18	.18
				.08 .02		.20 .19	.19	.20	.19

the youngest child and attitude toward working mothers. The hypothesis is not supported except in the case of education which is again highly significant and at the .0005 level.

Education is the most influential independent variable not only in comparison to the family role variables but also in comparison to the other social structure variables.

Hypothesis 3

The third hypothesis states that "Family role variables will have a significantly stronger relationship with voluntary association participation for women than men". Two MCA runs on the family role variables, one for men and one for women, allows such a comparison. The multiple R squares and the multiple R's assess the overall relationship and proportion of variation explained by the predictor variables. Therefore, we can determine for which sex the predictor variables have the greater explanatory power (See Table 3).

Without exception, the results are the opposite of what was predicted. The family role variables have a stronger relationship with and explain a larger proportion of the variation of voluntary association participation for men than women. The hypothesis was not supported.

Hypothesis 4

The fourth hypothesis, "Social structure variables will have a significantly stronger relationship with voluntary association participation for men than women", was tested through a similar series of MCA runs using social structure variables. The hypothesis was

TABLE 3

THE RELATIVE STRENGTH OF THE RELATIONSHIP OF FAMILY ROLE VARIABLES AND VOLUNTARY ASSOCIATION PARTICIPATION

	Women	Men
Number of Memberships	.040[a]	.088
	.200[b]	.296
Types of Organizations	.041	.112
	.202	.335
Hours spent on V.A.'s	.023	.075
	.152	.274
Number of Offices Held	.053	.135
	.229	.368

[a]MCA Multiple R squares: Top number listed

[b]MCA Multiple R's: Second number listed

not supported (See Table 4).

The comparison of multiple R squares and multiple R's indicates that the stronger relationship between social structure variables and voluntary association participation is present for women.

Exploratory

As in much social science research, the results produced more questions than answers. Since none of the hypotheses were supported, it was decided to transfer from a confirmatory mode of analysis to an exploratory one in the hopes that another examination of the data would provide additional information.

Although the etas, betas, multiple R's and multiple R squares obtained from multiple classification analyses were used, the central aspect of the MCA program is actually its derivation of adjusted deviations. Separate MCA runs were done for men and women for both family role and social structure variables. The number of voluntary association memberships was the dependent variable.

The deviations for each of the independent variables were examined and compared to the literature. The results for social structure variables are presented in Table 5. The deviations of number of memberships for the family role variables are presented in Table 6. Each variable will be discussed separately.

Age

Although the relationship between age and voluntary association is frequently shown to be curvilinear (Hausknecht, 1962; Payne, et al.,

TABLE 4

THE RELATIVE STRENGTH OF THE RELATIONSHIP OF SOCIAL STRUCTURE VARIABLES AND VOLUNTARY ASSOCIATION PARTICIPATION

	Men	Women
Number of Memberships	.139[a]	.198
	.373[b]	.445
Types of Organizations	.120	.199
	.347	.446
Hours Spent on V.A.'s	.065	.082
	.255	.286
Number of Offices Held	.130	.204
	.360	.452

[a]MCA Multiple R squares: Top number listed

[b]MCA Multiple R: Second number listed

TABLE 5

DEVIATIONS[1] FOR NUMBER OF MEMBERSHIPS
BY SOCIAL STRUCTURE VARIABLES

Independent Variable	Significance		Unadjusted Deviations		Adjusted Deviations	
	Men	Women	Men	Women	Men	Women
Age	.000	.000	(.22)[a]	(.20)	(.20)[a]	(.19)
1. 29 or less			-.29	-.34	-.43	-.40
2. 30-49			.46	.38	.29	.25
3. 50-65			.12	-.01	.32	.07
4. 66-75			-.46	-.01	-.01	.25
5. 76 or older			-.62	-.16	.04	.16
Education	.000	.000	(.28)	(.28)	(.28)	(.34)
11. through 11 yrs.			-.58	-.49	-.54	-.66
12. High School			-.05	-.05	-.11	-.07
13. Some college			.13	.10	.17	.19
16. Coll. degree			.39	.60	.45	.81
17. Coll ++			1.27	1.76	1.27	1.88
Residence	.583	.000	(.07)	(.15)	(.06)	(.17)
1. rural farm			-.10	.10	-.05	.14
2. rural nonfarm			.02	.37	.14	.38
3. urban other			-.02	.01	-.02	.05
4. Lincoln			.37	-.07	-.23	-.13
5. Omaha			-.03	-.31	-.11	-.36
Work Status	.301	.000	(.22)	(.22)	(.12)	(.19)
1. Work Full-Time			.21	-.23	.09	-.16
2. Work Part-Time			-.27	.62	.04	.52
3. Work, Temp. ill			.01	.75	.15	1.04
4. Unemployed			-1.07	-.91	-.64	-.31
5. Retired			-.56	-.13	-.27	-.14
6. In School			-.73	-.83	-.36	-.82
7. Keep House			.31	-.01	.21	-.02
8. Other			-1.01	.54	-.90	.43
Main Effects[2]	.000	.000				
			Men	Women		
[1]Grand Means			1.30	1.23		
[2]Multiple R^2			.139	.198		

[a]The etas and betas are in parentheses

TABLE 6

DEVIATIONS[1] FOR NUMBER OF MEMBERSHIPS
BY FAMILY ROLE VARIABLES

Independent Variable	Significance		Unadjusted Deviations		Adjusted Deviations	
	Men	Women	Men	Women	Men	Women
Marital	.061	.084	(.19)[a]	(.14)	(.11)[a]	(.10)
1. Married			.19	.11	.08	.07
2. Widowed			-.55	-.14	-.67	-.08
3. Div. or Sep.			-.60	-.52	-.85	-.58
5. Never Mrd			-.52	-.41	-.09	-.19
Children	.127	.322	(.20)	(.14)	(.15)	(.08)
0. None			-.46	-.31	-.34	-.14
1. 1			.16	-.22	.18	-.20
2. 2			.21	.12	.20	.08
3. 3 or more			.28	.17	.16	.09
Age of Youngest	.006	.114	(.18)	(.15)	(.16)	(.11)
1. Preschool			-.17	-.16	-0	-.08
2. Elementary			.53	.25	.36	.17
3. Jr. High			.64	.61	.48	.50
4. Sr. High			-.55	.31	-.80	.19
5. Adult			-.02	-.04	-.35	-.09
In Favor of Mothers Work	.000	.855	(.15)	(.02)	(.15)	(.01)
1. Yes			-.22	-.02	-.22	.01
2. No			.28	.02	.28	-.01
Main Effects[2]	.000	.003				

	Men	Women
[1]Grand Means	1.29	1.25
[2]Multiple R^2	.088	.040

[a]The etas and betas are in parentheses

1972), controlling for income and education produces a more linear relationship (Cutler, 1976). Table 5 shows clear patterns emerging from the NASIS sample; controlling for the other social structure variables dissipates the curvilinear pattern noted for the unadjusted deviations. For both men and women, the youngest groups have the lowest membership rates with means of .87 and .83 respectively. Male rates increase through the 30-49 (1.59) and the 50-65 (1.62) age groups. They take a sharp decrease in the 66 to 75 group (1.29) and recover slightly in the oldest group, 76 and above (1.34). Female rates, on the other hand, have a bimodal high average in the 30-49 and the 66-75 (1.48) age groups with the second lowest mean in the 50-65 group (1.3) and a decrease in the oldest group (1.39). The men average more memberships through 65 years but women average more thereafter. For both sexes, age was determined to be significant.

Education

Wright and Hyman's (1958) national sample survey showed that there is a direct positive relationship between voluntary association membership and socio-economic status as measured through a variety of indicators including income, occupation, home ownership, interviewer's rating of level of living and education.

Education has been an especially consistent predictor of voluntary association participation (Axelrod, 1956; Scott, 1957; Hausknect, 1962; Smith and Freedman, 1972; Tomeh, 1973) and the relationship holds cross-nationally (Curtis, 1971). Any differential influence of education between the sexes, however, has not been specifically examined. In

this analysis, education is a highly significant predictor variable and the most influential of the social structure variables for both men and women. Table 5, however, suggests the presence of interaction between sex and education both with and without controlling for the other social structure variables.

Women have a wider range of deviations, depending on their level of education, than men. Increasing male education from 11 years or less to 17 years or more increases their average number of memberships from .76 to 2.57 while controlling for age, residence, and work status. For women the range is from .57 to 3.11.

Community Size

The literature concerning community size or type of residence and voluntary association participation has not been consistent (Tomeh, 1973). There is evidence to suggest a positive relationship (Eitzen, 1970), a negative relationship (Hausknecht, 1962) or no relationship (Babchuk and Booth, 1969) between the two variables. These findings could be due to different methodologies. For example, Babchuk and Booth's (1969) contingency analysis of their longitudinal study suggested that there was no relationship between community size and membership rates. However, Lockwood's (1976) MCA of the same data produced a higher participation rate in the smaller communities. Such a finding indicates the importance of continuing developments in methods and statistical analysis as well as underlining the importance of controlling for correlated variables.

In Nebraska, the Omaha respondents have the lowest average number of memberships with 1.19 and .87 memberships for men and women, respectively. Lincoln women have the second lowest average (1.1) but Lincoln men have the highest average for the state (1.53) while the rural nonfarm women averaged 1.61, the highest average for women. A negative relationship between community size and voluntary association is supported for women for whom the results are considered significant. No pattern is suggested for men but then the significance level is an inconsequential .583.

Work Status

Work status is rarely used in the voluntary association research. Distinctions between full and part-time employment could not be located. Unemployed men are less active than employed men in both instrumental and expressive groups. Unemployment for women is related to decreased participation in instrumental groups only and does not affect affiliation in expressive groups (Booth, 1972).

The data used here indicate that while the results for the work status variable are not significant for men, they are highly significant for women. However, it is difficult to discern a pattern. Of the eight categories the deviations are positive for three categories, working part-time, work but temporarily ill (which has the highest average), and the residual "other" category. On the other hand, full-time employment, being unemployed, retired, in school or keeping house negatively affected V.A. membership rates. It was fairly clear cut for men although not acceptably significant. Employment, either full or part-time even if

temporarily ill, produces positive deviations while unemployment, retirement, or student status has negative effects.

Marital Status

Married people have higher rates of membership than the unmarried, whether single, widowed or divorced (Scott, 1957; Hausknecht, 1962; Babchuk and Booth, 1969; Payne et al , 1972) and the relationship holds cross-nationally (Curtis, 1971). Booth (1972) found that the effect of marital status on membership rates is greater for men than women.

This analysis agrees with these findings (See Table 6). Being married produced the only positive deviations with 1.37 and 1.32 means for men and women,respectively. The divorced or separated status produced the largest negative deviation with .44 and .67 means for men and women with a larger range found for men. The smallest difference between men and women is in the married category while the largest difference is in the widowed category with means of .67 and 1.17 for men and women, respectively.

Women average more membership among the widowed, divorced or separated while never married men average more memberships than never married women. Significance levels were .061 for men and .084 for women.

Number of Children

Generally, the number of children encourages formal organization affiliation (Wright and Hyman, 1958) but having more than two children decreases membership rates (Payne et al , 1972).

In Table 6 the negative deviations are associated with the no children category for both sexes and the one child category for women.

The other categories have positive deviations. The significance levels, however, are .127 for men and .322 for women.

Age of Youngest Child

Types of organizations joined differ by stage of the family life cycle as certain stages are conducive to certain types of organizations (Knoke and Thomson, 1977). Higher membership rates are favored when all children are of school age suggesting that the age of the youngest child is the critical factor (Payne, et al , 1972).

In the NASIS sample, the age of the youngest child has a higher level of significance for men than women. For both sexes, the Junior High School Age category produced the highest positive deviations. There is a sharp drop for men in the Senior High category while the relationship is almost perfectly curvilinear for women.

Attitudes Toward Mothers Working

The writer has been unable to locate a single study concerned with attitudes related to familial obligations and affiliation. Table 6 shows that when such a measure is used as an independent variable the significance level is very high for men, above .0005 but a dismal .855 for women. In moving from a favorable to an unfavorable attitude toward mothers working men and women have opposite direction changes in their response. The deviations move from .01 to -.01 for women and from -.22 to +.28 for men. Apparently male attitudes toward working mothers are more important for V.A. membership than women's.

CHAPTER VI

DISCUSSION AND CONCLUSIONS

Although the specific hypotheses developed for the study were not supported, the findings do not reject the general ideas from which they were developed. Smith contends that male and female life experiences are different and the data indicate that they are.

In terms of relative influence, the results were almost the direct opposite of what was predicted. Social structure variables are more influential as antecedents of voluntary association participation for women than family role variables. This fails to support the assumption that the different life experiences of women that need to be studied necessarily center around the home and family.

On the other hand, very different results were obtained for men. Except for education, a variable whose importance is consistently supported in the literature, family role variables are more important than social structure variables, a surprising result. This finding indicates that the family role variables, generally slighted in voluntary association literature, need to be included. For men, at least, they are more important than age, residence, and work status.

Comparisons of the influence of each set of variables for men and women were equally surprising. Family role variables were more important for men and social structure variables were more important for women in studying voluntary association participation. The exploratory analyses produced similar differential results for men and women. The findings for women were less consistent with the literature than those

for men.

Therefore, the findings do support Smith's primary contentions that different factors are oprating for men and women, that different models may be appropriate, and that sociology's inclusion of women has been inadequate.

The sociological perspective must be expanded to include both the male and female perspectives. The results of this analysis indicate that there are enough and large enough differnces between men and women to warrant further research in the area. The comparisons of relevant models and the relative influence of various independent variables by sex, however, it a new area. It is the opinion of the writer that it is one with much promise.

The variables presented here provide the initial steps towards operationalizing life experiences; the ongoing cumulative nature of social research requires a recognition of their inadequacy. More comprehensive measures need to be developed that will provide more accurate reflections of male and female life experiences.

One of the areas of theoretical primise with which these concerns of study can be incorporated is that of family identity and role salience. The results presented here suggest that the family is more important, especially for men, than traditionally assumed. An additional literature search focusing on family role salience may provide clues to the differing levels of importance of the family role and social structure variables for men and women.

Theories of voluntary assocation participation also promise a fruitful merger. Ethnic community and compensatory theories may help to explain the differential impact of family role and social structure variables on men and women. For example, conpensatory theory would suggest that less daily contact with the external world would encourage full-time homwmakers to participate in voluntary associations more in accordance with their social structure characteristics such as education level than with family role variables. Ethnic community theory need not be limited to ethnic or racial groups. Women's identity as mothers, for example, would encourage them to participate in a variety of community and youth serving organizations increasing their participation rates also in accordance to social structure characteristics.

Unfortunately, achieving closure on this particular research project excluded a continued examination ot these theoretical areas. But the results of this analysis certainly encourages continued research and theoretical developments.

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APPENDICES

Appendix A

Secondary Analysis and Theory

Scientific explanation is dependent on both data and theories with the data describing the events and the theories explaining the relationships. Doby (1969) distinguished four levels of explanation: 1) identification, 2) description, 3) description of the interaction of the factors, 4) explanation why they produce the effects they do. The first focuses attention and the second conceptualizes the variables in question. The third and fourth levels focus on correlation and causation between the variables and with which explanation makes the leap from description to theory.

This section is concerned with the relationship between theory and methods. Wallace (1969:ix) illustrates this interactive and ongoing relationship very nicely as shown in Figure 2. The relationship can

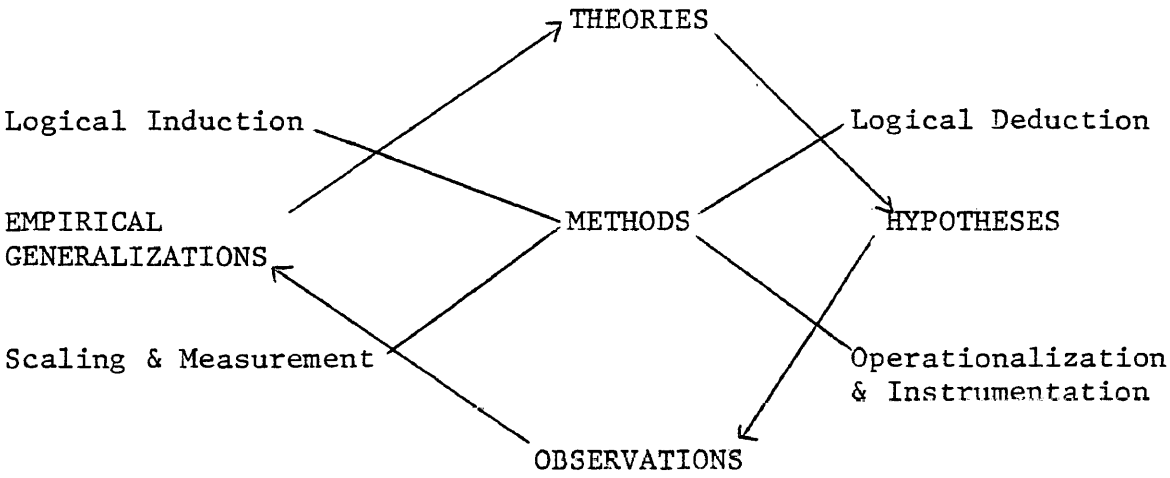

Figure 2. The Components and Process of Scientific Sociology.

be better conceived as a spiraling one with ever increasing refinements in both theory and methods rather than a circular process that fails to capture its progressive nature.

This developmental perspective is as necessary for methods and measurement as it is for theory. However, as Greer (1969) points out, it is difficult to enumerate many variables of great theoretical interest while others that can be measured precisely are often of marginal importance for our theories. The refinement of measurement, however, must continue because it increases the generality, precision and power of our theories.

Theory construction, as seen by Greer (1969:123) begins as a recognition of regularities.

> Theory is, then, a constructed view of aspects of the world from which regularities can be deduced. It is logically consonant with, and implies known laws. It explains them by including them in a larger regularity and by ordering them in a pattern methaphorically familiar. And equally important it allows us to predict other, hitherto unknown laws. From this the process of theory construction follows...

Therefore, we begin with the known, speculate about relationships, construct a theory and test it. Theories, however, cannot be tested directly, but they must be verified through "deduced laws and contrived hypotheses" (Greer, 1969:125). In other words, theories can only be tested using measurable units.

This transition from the directly untestable theory to the measurable and therefore testable indicators requires confidence in the validity of the indicators as representative of the abstract concepts involved. Blalock and Blalock (1968:12) referred to this relationship

as an espistemic correlation. It is the two way movement between the abstract and the concrete that bridges the gap between theory and research.

Similarly, Hirschi and Selvin (1973:177) have described theory systems as;

> floating above the plane of observation and is anchored to it by rules of interpretation...From certain observational data, we may ascend, via an interpretative string, to some point in the theoretical network, thence proceed, via definitions and hypotheses, to other points from which another interpretative string permits a descent to the plane of observation.

The relationship between the indicators at the concrete observable levels representing the abstract theory has been referred to as an auxiliary theory. Blalock (1969) also asserts that while such a theory is necessary to test an abstract theory the wider the applicability of the theory the greater one's choices of indicators and the potential for use of multiple indicators. The abstract theory itself and its scope of applicability, however, need not be the only determinants of an auxiliary theory. Considering the particular population, the measuring instruments available and the research design being used are not only appropriate but necessary when constructing an auxiliary theory (Blalock, 1969).

This secondary analysis may seem somewhat inconsistent with the assumptions in primary research in which the research design and measuring instruments are to be developed for testing of a particular theory. This assumption has generally been extended to include the development of the auxiliary theory. Wallace's circular diagram, however, suggests that theory construction and testing is an

ongoing mutually interactive process that may originate at any point.

This concept has been supported by Zetterberg (1965:115-118) who noted that validity requires continuous adjustment of both theorizing and the techniques of research to one another and "can be achieved not only by changing one's indicators but by changing one's definitions." Given the interactive nature of theory and methods, secondary analysis provides an acceptable research design and measuring instrument that may be considered when developing such an auxiliary theory.

Many people have noted the benefits of secondary analysis which has been defined as "the extraction of knowledge on topics other than those which were the focus of the original surveys" (Hyman, 1972:1). It is not necessary to collect new data for every problem. The recognition of this as well as the savings in time and money has led to an expansion of social science data archives (Glock, 1967:58). Archives provide quality research with well developed items and large samples that may otherwise be unavailable to the researcher.

Hyman (1972:5-8) was the first to attempt a "systematic and comprehensive statement of principles and procedures of secondary analysis". He discussed many benefits, practical, social and theoretical. Availability of money, time and personnel have always restricted social research. Secondary analysis provides maximum utilization and conservation of these resources. It can provide quality data when expensive primary research is not possible or can be used as a preliminary to primary research allowing the development of a better,

more effective and more efficient research design. Used in this way, secondary analysis may provide "clues to significant empirical relationships and theoretical constructs" that may be employed to develop further study in the area (Massarik, 1967:415).

Socially, secondary analysis reduces the number of "intrusions and impositions" into the lives of the subjects and it provides data for researchers without access to research monies or the administrative temperament necessary to obtain and direct large research projects. In addition, it provides excellent training material and a diversity of data.

Secondary analysis benefits theory and substantive knowledge by expanding the types and number of observations with a variety of social conditions, measurement procedures and variables. Past studies may give us a better understanding of the past while analyses of a series of surveys can provide insight into social change. Such analyses may provide evidence of similar theoretical models among the hypotheses thus supporting the construction and refinement of a theory.

Theory generation may also be aided by secondary analysis. The time and energy that would have been used for design development and data collection can be used for theoretical analysis. In fact, it has been asserted that most theory generation from quantitative data will be based on secondary analysis (Glazer and Strauss, 1967). Glazer and Strauss (1967:189) go on to say that secondary analysis is "uniquely well suited for the generation of theory because accuracy is not as important as in description or verification. This assertion is derived

from their initial premise that theory should be based on data, that it should reflect reality.

Massarik (1967:14) suggests that it is possible to create "near-experimental conditions" with secondary analysis through data manipulation. Such a position also strengthens its use in theory development. Furthermore, Hyman (1972:24) specified two unique features of secondary analysis that are helpful to theory development both provided by the diversity found in the available surveys. First, instead of creating narrowly defined indicators from prescribed concepts the researcher must take a broader perspective examining a "diverse array" thus being "compelled to think broadly and abstractly" concerning the indicators of the concepts. Second, an examination of the variety of studies potentially appropriate will reveal a range of techniques used and problems encountered that will also aid the research in broadening his/her perspective.

This information and broader perspective allows a researcher another advantage. If one direction of analysis proves useless, the researcher is more easily able to change directions and to test alternative explanations (McClosky, 1967).

Hyman asserts that trend studies should be started today using social indicators because such studies will influence the research potential of the future. One example is the Nebraska Annual Social Indicators Survey (NASIS) conducted by the Bureau of Sociological Research at the University of Nebraska-Lincoln.

Hyman (1972:13) also warned that the researcher "must be able to see particular questions and indicators as serving diverse purposes and endow them with new meaning and relevance for his concept... (without) misusing or misapplying a measure." The present study attempts to do this utilizing the voluntary association measures in NASIS as indicators of social participation and other indicators as representing family and social structure variables.

Appendix B

NASIS: Nebraska Annual Social Indicators Survey

The Nebraska Annual Social Indicators Survey was initiated by the Bureau of Sociological Research at the University of Nebraska--Lincoln to integrate data collection in the state meeting the needs of a variety of public agencies and university and college departments. Advantages of such omnibus surveys were discussed in Appendix A. Although the Bureau of Sociological Research conducted the survey, the NASIS Advisory Committee consisting of representatives of the state agencies and university and college departments was also involved in the planning.

The first survey was conducted in the Spring of 1977. The interview schedule included a core of quality of life questions that would be included in subsequent surveys to assess change as well as items representing the needs and interests of the state agencies and the research interests of the faculty of the Department of Sociology at the University of Nebraska--Lincoln. Additional questions were also purchased by agencies for inclusion. Over 250 items covered the following areas: characteristics of persons in the dwelling unit, migration history, demographic characteristics, employment, fertility history, income and consumption, transportation, time budget, social integration, public safety, political activity, education, health, mental health, leisure and recreation, quality of environment and opinions. A preliminary draft of the schedule was pre-tested both

informally by the investigators and formally by professional interviewers.

Two experiments in interview administration were included to aid decision making in future surveys. The first compared personal and telephone interviews that comprised one-third and two-thirds of the sample, respectively. Johnson (1977) noted that many studies have concluded that there is no difference in quality of information between the two interview techniques. The 1977 NASIS experiment supported this and future surveys will be by telephone only.

The second experiment involved the use of visual aided recall (flash cards) or simply reading the set of response choices in selected items. One such item involved memberships in voluntary associations, Higher numbers of memberships are reported with the use of aided recall instead of simply asking the respondents the number of organizations to which they belong. No significant differences, however, were found between visual and audial aided recall techniques.

The population consisted of the non-institutionalized persons in households residing in the State of Nebraska during the survey and excluded those under 18, in custodial institutions or on military reservations and transient visitors.

The NASIS survey involved two sampling designs. Random Digit Dialing (RDD) was used for the telephone surveys. Its major advantage is that every number has an equal probability of selection including unassigned, unlisted, previously assigned and newly assigned numbers. Within three digit exchanges, random four digit numbers were computer generated and those outside of the range of assigned numbers were deleted.

Multistage stratified area probability sampling was used to select respondents for the personal interviews. The 1970 Census enumeration districts provided 1200 primary sampling areas within four geographical regions and classified as urban or rural. A systematic sampling procedure weighted according to the estimated 1975 population was used to select 120 of these. A second stage divided these into smaller areas that could be economically enumerated. Once enumerated specific households were sampled using a systematic procedure with a random start. The respondent to be interviewed in each of the households was chosen by a set of selection tables randomizing the choice according to the number of eligible respondents. These tables which were printed on adhesive labels and placed on the cover sheets in random order gave every eligible respondent an equal probability of selection.

Professional interviewers were employed and trained. Each completed interview was assigned a sequence number that allowed monitoring of its progress through editing, verification, coding and keypunching. Each case contained 13 keypunched cards. The information was transferred to computer disk storage, cleaned and recoded and then stored in a SPSS Archive file containing over 600 variables. This master file is available to the faculty and graduate students of the sociology department at UNL on request. Copies are also available for purchase by other users. Another subfile was created from this master file for use in this study with permission of Lynn White, Director of the Bureau of Sociological Research.

The telephone and personal interview samples produced 18.3% and 20.0% refusal rates, respectively. Five call backs failed to establish contact in 15.2% of the personal interview samples and for 296 telephone numbers. It is unknown how many of these numbers were unassigned or fit an ineligible category.

A total of 1867 usable interviews were obtained including 1263 telephone interviews, 569 personal interviews and 35 "type 13" interviews which were telephone interviews conducted in the areas of the personal interview sample used to supplement areas with high refusal or non-contact rates.

A set of weights were developed to produce a sample of individuals in households and to correct the unbalanced sex ratio in the sample. Such a procedure produces statistics representative of all persons in households. Without weights, the sample is representative of the households, not the individuals in the households. Likewise weights were used to correct for over-representation of females and under-representation of males in the sample to bring it more closely aligned with the actual sex distribution in the state.

Appendix C

Multiple Classification Analysis

Multiple Classification Analysis (MCA) has been defined as "a technique for examining the interrelationships between several predictor variables and a dependent variable within the context of an additive model" (Andrews et al , 1975:1). It provides a measure of the relationship of an independent variable with a dependent variable while simultaneously controlling for all other independent variables. The feature of particular importance for this analysis is its potential to "examine the pattern of changes in the effects of a given variable as we introduce more variables as controls" (Nie, et al , 1975, 409). This allows MCA to present the effects of an independent variable on the dependent variable both before and after taking the other variables into account.

Andrews et al (1975:39, 50) state that Multiple Classification Analysis is both a "computerized version of ... long known techniques for analysis of variance" used for data with unequal cell sizes and a multiple regression technique using dummy variables. It's major advantage is that it was specifically designed to handle some of the problems facing multivariate analysis and found in these techniques. Unlike multiple regression it does not require interval measurement of the independent variables so it can be used with nominal predictor variables. However, the dependent variable should be interval or dichotomous. MCA was developed for use with correlated predictors which is of particular concern when using analysis of variance.

Controlling for such variables allows one to delineate their effects either separately or in combinations of variables. Finally, MCA does not assume a linear relationship as required by both multiple regression and analysis of variance.

Mathematically, MCA computes the mean of the dependent variable measured within each category of the independent variable and compares it to the grand mean which is computed across all categories. The means within each category are printed as deviation from the grand mean three times. The first are the "unadjusted" deviations simply presenting the deviations without controlling for the other independent variables. The second column lists the "adjusted for independents" deviations in which the effects of the other factors or categorical independent variables are controlled. The third set of deviation are those labeled "adjusted for independents and covariates" for which both the factors and covariates (interval level independent variables) are controlled.

The statistical formulas for these means are as follows:

$$\text{Grand Mean of } Y = \frac{\sum_k w_K Y_k}{\sum_k w_k}$$

$$\text{Mean Y for category j of predictor i} = \frac{\sum_k w_{ijk} Y_{ijk}}{\sum_k W_{ijk}}$$

where Y_k = individual k's score on the dependent variable

w_k = individual k's weight

(Andrews et al , 1975, pp31,32)

The MCA computer program printout includes both eta and beta coefficients with the eta coefficient associated with the unadjusted deviations and the beta coefficients associated with the adjusted

deviations. They both assess the relationship between the predictor and dependent variables. The eta is concerned with the simple bivariate relationship while the beta is an estimate of the relationship when the other independent variables are held constant.

Eta, defined in the SPSS manual as the common correlation ratio (Nie et al , 1975), is derived by taking the square root of the quotient of the sum of squares based on unadjusted deviations divided by the total sum of squares, Beta is equal to the square root of the quotient of the sum of squares based on adjusted deviations divided by the total sum of squares. Nie et al suggest that the beta values can be viewed as standardized partial regression coefficients.

The statistical formulas are as follows:

Sum of Squares based on unadjusted deviations for

predictor i = $U_i = \sum_j (\sum_k w_{ijk}) \ (\bar{Y}_{ij} - \bar{Y})^2$

Sum of squares based on adjusted deviations for

predictor i = $D_i = \sum_j (\sum_K W_{ijk}) \ (A_{ij})^2$

where A_{ij} = the adjusted deviations of the jth category of predictor i on the final iteration

Eta for predictor i = $N_i = \sqrt{U_i/T}$

Beta = $B_i = \sqrt{D_i/T}$

where T = Total Sum of squares

(Andrews et al., pp 31,32)

Although Nie, et al define Eta as the proportion of variance explained by a given nonmetric factor, Andrews, et al warn that although the Beta is equal to the sum of squares attributable to the predictor it cannot be defined as a percentage of variance explained

because of possible correlations among the independent variables. However, the relative importance of the different predictors is indicated by the rank order of these betas. Running two MCA's with and without a particular predictor and comparing the multiple R-squares also gives an indication of the predictor's importance. The increase is equal to the squared part correlation which assesses a predictor's importance. The two multiple R-Squares can also be used to derive the squared partial correlation. The formulas are:

Squared part correlation = (R^2 adjusted with all variables) - (R^2 adjusted omitting one variable)

$$\text{Squared partial correlation} = \frac{\text{Squared part correlation}}{1 - R^2 \text{ adjusted omitting one variable}}$$

Both of the above assess the marginal importance of a predictor (as compared to the relative importance indicated by the beta), the former relative to the total variance in the dependent variable, the latter relative to the unexplained variance. Also the beta will exceed the partial correlation whenever the predictor in question is more predictable from the other predictors than is the dependent variable (Andrews *et al*, 1975:49).

In themselves the multiple R assesses the overall relationship relationship and the R squared "represents the proportion of variation...explained by the additive effects of the independents and covariates (Nie *et al*, 1975:410).

Andrews *et al* (1975) explain the "central aspect" of the program, its derivation of adjusted deviations, as an attempt to fit an additive model to the input data through a series of approximations or

iteration. Each iteration recalculates the deviations using the weighted average of the latest estimates of the coefficients from other predictors applicable to the category. As the coefficient gets closer to the true value, the difference between the values of the present and previous estimates decrease. The iterations cease when this difference reaches a small predetermined value. They assert that the adjusted deviations produced this way are mathematically identical to those that could be derived by solving for a set of simultaneous equations.

However, interaction between the variables may present problems for multiple classification analysis. The SPSS manual simply dismisses the use of MCA in the event of strong interaction between factors (Nie et al , 1975). The MCA manual, on the other hand, suggests the creation of a combined or pattern variable or running separate analyses. MCA can be used to determine the presence of interaction through the use of variance feature.

A number of studies have successfully used Multiple Classification Analysis. Separate MCA runs were used to determine the presence of interaction between ethnicity and socioeconomic status in the social participation study by Williams and St. Peter (1977). MCA supported both ethnic community and compensatory theories regarding social participation of Blacks by controlling for background variables (McPherson, 1977). The importance of such control has been illustrated by both Lockwood whose re-analysis of the Babchuk and Booth longitudinal data using MCA produced differing results (1976) and Cutler whose MCA

challenged the previous findings regarding the relationship between age and social participation by producing controls for the correlated income and education variables.