The problems associated with proxy reporting are well documented (e.g., Tanur, 1990). However, for household surveys, it is neither reasonable to expect, nor practical to seek, individual reports from each family member in every household. Some members can not be contacted, others would refuse, and all of these individual reports would require a much greater expenditure of resources. Instead, it might be possible to find some method for estimating the accuracy of proxy responses from specific households. Interviews with every family member would only be attempted in those households with a very low probability of accurate proxy knowledge. Even if this information were not used to screen families, it would provide a means of evaluating the quality of survey estimates.

In order to explore the possibility of collecting such information, BLS contracted with Oak Ridge National Laboratory (ORNL) to conduct an experimental study of the level of proxy knowledge and the communication patterns within selected households concerning the employment history and expenditures of individual members (the Intrahousehold Communications Study (IHCS)).

We believe that certain family demographic and situational characteristics may be useful for predicting the level of proxy knowledge within households. Specifically, we believe that certain demographic and situational characteristics are related to different levels of family cohesion, which are reflected in the amount of knowledge family members share. In this paper, some of the data collected in the IHCS are used to classify families according to their extent of cohesion. The associations between cohesion and various household characteristics are examined.

A Typology of Family Cohesion

As early as the 1930's, the family sociologist Angell (1936) identified cohesion as an important dimension for trying to understand interactions among family members (or "family integration."). More recently, in their examination of the research on families, Olson, Sprengle, and Russell (1979) found cohesion to be one of the two concepts most often used in describing family behavior. In fact, they use cohesion in developing a "family systems" model for clinical application. They identify two components of family cohesion: "the emotional bonding members have with one another and the degree of individual autonomy a person experiences in the family system. " (1979, p.5, italics are theirs).

From our perspective, family cohesion is a group-level concept, but it must be measured in terms of specific interactions among family members. We believe the family exists to meet three types of needs of the individuals in it -- social, emotional, and material. The interactions between family members are designed to accomplish this goal, and a particular interaction can be classified according to which one of the three needs it primarily addresses. Thus, the level of family cohesion, or the particular balance achieved between the two opposing forces identified by Olson, Sprengle and Russell (1979), is determined by the ways in which a family goes about meeting the social, emotional, and material needs of its members.

We measured the amount of cohesion demonstrated in the performance of one family activity, the purchase of goods and services. To do this, we developed three indicators of the interactions surrounding this activity
Interactions concerning the joint participation of family members in making the expenditures were taken to reflect level of attachment, or the strength of emotional bonds. Interactions indicating the nature of the communications between family members about expenditures were considered to be ones satisfying social needs. Interactions having to do with the division of financial responsibility for economic transactions, or the degree of economic independence of various family members, were classified as material interactions.

Details about the creation of these indicators and the way they were combined to measure cohesion are given in a later section; but, eventually, families were assigned to one of four levels of cohesion resembling a collapsed set of the categories developed by Olson, Sprenkle, and Russell (1979). The four levels of cohesion, in ascending order, are (1) disengaged, (2) separated, (3) connected, and (4) enmeshed. In the disengaged family, the members are independent, and the emotional bonds are weak. Limited communication takes place among the members. Members of separated families exhibit considerable economic independence, but emotional bonds are stronger than in disengaged families. There is also a moderate amount of communication among family members. Connected family members display less economic independence, and the emotional attachments are relatively strong. All family members communicate well with one another. There is little economic independence in enmeshed families, and the emotional bonds are quite strong. Communication is high in at least one direction, but the lines of communication may not travel both ways.

Unlike Olson, Sprenkle, and Russell (1979), we are not interested in family pathologies. In fact, it is quite likely that each state of cohesion is more functional than the others for at least some tasks. Our interest is in the association between family cohesion (or its components) and the level of proxy knowledge about expenditures. We believe that some states of cohesion are likely to be more conducive to the creation of proxy knowledge than are others. We are also interested in which family characteristics are associated with the different states of cohesion and, therefore, might affect proxy knowledge.

Family Characteristics

A total of sixty-nine households and 166 people participated in this study. Households including at least two members 16 years of age or older were recruited from the Knoxville, Tennessee metropolitan area. Sixty of the sixty-nine families were included in our analyses. Nine families were deleted because they did not fit our definition of a family or had too much missing data.

Five family-level independent measures were created to predict the level of cohesion within families, but they can also be used to describe the families. These characteristics include family age, family education, family size, family type, and family income (See Table 1). While family age and family education were created based on those family members who participated, the other measures reflect the entire family.

For age, if both a husband and a wife participated, family age was the average of the husband's and wife's ages. If only a wife or a husband participated, the family age was the age of the one participating. If no husbands or wives participated, the family age was the age of the oldest person participating. For education, if both a husband and a wife participated, then the family education was the father's education. If only a wife or a husband participated, the family education was the education of the one participating. If no husbands or wives participated, then the family education was the education of the oldest person participating.

Design and Procedure

A computer assisted personal interview survey was developed consisting of eight modules of questions. Upon arriving at the testing site, all participants were asked to provide their name, address, and phone number. They were asked if they had any questions
about the survey they were about to complete. Instructions were then given to participants about how to use the computer.

An experimenter worked with each household to answer the first module of questions which included household level questions inquiring about 1) the number, names, and ages of all household members, 2) which members were participating, 3) who in the household owns or rents the dwelling, 4) what is the association between each of the participating members, 5) who is responsible for the financial/accounting records for the household, 6) who maintains records for income tax purposes for the household 7) who is responsible for writing checks to pay bills for the household, 8) who is responsible for balancing the check book each month for the household, 9) who in the household has credit cards, 10) who buys groceries regularly for the household, 11) whether the household shops for clothing, 12) whether the household shops for clothing on special occasions, 13) the total household income in 1990, 14) how many members of the household worked for pay or had a job last week, and 15) how many of these were employed full time, that is, 35 hours or more.

After completing the household level questions, subjects began their individual sessions at separate terminals. Two to five members of a household were interviewed simultaneously on individual computer terminals. Each household member gave individual demographic information (module 2) and reported employment and expenditure information for themselves and one or two other members of their household (modules 3, 4, 6, and 7). For each proxy report about another household member, respondents answered communications questions concerning how they learned about that person's employment (module 5) or expenditures (module 8). Here we are only concerned with the first module of family level questions, and module 8, concerning how respondents communicate expenditure information.

Participants were asked not to discuss the questions or talk during the survey. They were also told not to look at each other's screens. One of the researchers was always present in the room to answer any questions during the survey. Paper and pencils, calculators and calendars were available for all participants to use.

Upon completing the survey, participants were debriefed, compensated, and thanked for their participation.

**Measurement of Family Cohesion**

Although both dyadic (i.e., family member pairs) and family level summary measures were created, only family level measures are discussed in this paper. At the family level, three dependent summary measures were developed to classify our families with respect to cohesion. The creation of these measures is summarized below.

Each of the sixty households was classified as 1) *enmeshed*, 2) *connected*, 3) *separated*, or 4) *disengaged* based on the substance of their social, emotional, and physical interactions. Three summary measures captured the character of the family's social,
emotional, and material interactions: 1) the nature of the communication between family members, 2) the strength of the bonds between family members, and 3) the degree of independence of family members.

The nature of communication between family members was measured by the degree to which family members communicated by conversation, notes, and observation. The degree of independence of family members was measured in terms of how many family members had full time jobs, and how many participated in various aspects of the family's finances. The nature of the bonds between family members was measured by the degree to which family members participated in shared economic activities.

Family scores on each of these three summary measures were classified into three categories based on their location in the distribution. Families were either independent, somewhat independent, or dependent. Families either had strong bonds, moderate bonds, or weak bonds. Lastly, families either had high communication, moderate communication, or low communication.

Overall, eleven households were very independent, forty-two were moderately independent, and seven were dependent. Twelve of the households had strong bonds, forty-two had moderate bonds and six had weak bonds. Seven of the households had high levels of communication, forty-five had moderate levels of communication, and eight had low levels of communication.

Analysis revealed an association between two of these summary measures. A families' level of communication was related to the nature of bonds between family members ($X^2 (4, N = 60) = 40.658, p<.000$). That is, families who communicated a lot tended to have the strongest bonds. Families who communicated to a moderate extent tended to have moderate bonds. Lastly, families who communicated very little tended to have weak bonds.

This finding may be due to the similarity between the methods for measuring these two dimensions and their close proximity in the instrument. We do believe that the bonds measure is the weakest. Although not significant, the analysis also revealed that families who were very independent were more likely to have moderate to low communication. Families that were somewhat independent were more likely to have moderate communication. Families that were dependent were more likely to have moderate communication. There was no association between independence and bonds.

From these three summary measures, families were classified as enmeshed, connected, separated, or disengaged (See Table 2). Of the sixty households, eleven were enmeshed, thirty-five were connected, ten were separated, and four were disengaged. We expected the distribution to be skewed toward the high cohesion end because the families willing to participate together in the study were likely to be relatively cohesive. Within a category, however, the families are hopefully representative. In the population, we believe it is likely that connected and separated families predominate.

This assignment largely followed from the characterizations of the different levels of cohesion presented earlier. Some difficult decision, however, had to be made about combinations, which, conceptually, fell on the border between two categories.

The enmeshed families were those that were dependent with moderate bonds and moderate communication or ones that are somewhat independent but have strong bonds and a high level of communication. The
connected families fell in one of four groups. They were somewhat independent with strong bonds and moderate communication, somewhat independent with moderate bonds and high communication, somewhat independent with moderate on the other two dimensions, or independent with strong bonds and high communications. Families that were somewhat independent and had moderate bonds and weak communication, weak bonds and moderate communication, or weak bonds and low communication were classified as separated. So were families that were independent and had either strong bonds and moderate communication. Disengaged families were independent with either moderate bonds and low communication or weak bonds and low communication.

**Results**

The analyses presented below was restricted to bivariate relationships given the relatively small number of families. Thus, the effects of each of the independent variables cannot be isolated, and this confounding must be kept in mind when interpreting the findings.

**Association Between Family Characteristics**

In considering the associations between family characteristics and cohesion, a problem arises from the fact that the different characteristics are not independent of one another. For example, we found several significant associations in our data. Family type and family age were related (p=.002). Families without children tended to have an average adult age of less than 30, while those with children older than 17 were more likely to have spouses over 50. The average age of parents with children under 18 was likely to be between 30 and 50. Given these results, it is not surprising that family size was related to age (p=.001).

Family income was related to both the age and the size of the family. Income tended to increase with age (p=.02). Large families were the ones most likely to have high income (p=.02).

**Association Between Family Characteristics and Typology of Family Cohesion**

Our results indicated that only family size was related to family cohesion (See Table 3). Families with 5 persons or more were most likely to be enmeshed families (67%) and, to some extent, connected families (33%). Families of three or four persons were most likely to be connected families (72%). Two person households fell in all categories, but a majority (52%) were connected families (See Table 4).

In several cases, family characteristics were related to the separate components of cohesion (See Table 3 and Table 4). Smaller, 2 person families tended to be somewhat independent (55%) or very independent (38%). Three to four person families were almost exclusively somewhat independent (96%), whereas larger families, tended to be dependent (67%).

Family income was related to communication. Families with incomes between $30,000 and $44,999 and greater than $45,000 tended to have moderate to high communication. Families with incomes below $30,000 were more likely to have moderate to low communication.

Though not significant, family type and age showed a tendency to be associated with a family's level of independence. Younger families were highly or somewhat independent families. Families between the ages of 30 and 50 tended to be somewhat independent, and in a few cases, dependent. Older families were more likely to be somewhat independent. Families who had no children, or their youngest child was older than 17, tended to have moderate to high communication. Families whose youngest child was between 13 and 17 years of age, tended to have moderate communication, whereas families with young children had the lowest communication.

**Discussion**

We stated our belief that certain demographic and situational characteristics may
predict different levels of family cohesion, which in turn are reflected in the level of knowledge within families. Our goal was to look at the relation between certain demographic and situational characteristics and levels of family cohesion. To this end, we developed a typology of family cohesion based on the interactions among family members. Some of the data collected in the IHCS were used to classify families according to select situation and demographic characteristics and according to their extent of cohesion. The associations between cohesion and these characteristics were examined.

The results revealed no clear connection between cohesion and family characteristics. However, family size was related to the level of cohesion, and several of the demographic variables were associated with the different dimensions of cohesion. It could be that other less obvious characteristics have more to do with cohesion. These might include the prior socialization of the parents or other factors entangled with family history. Furthermore, although there was no clear relationship between family cohesion and select characteristics, our family cohesion measure may still be important for predicting other family behaviors, particularly proxy knowledge. Tucker and Miller (1993) explore this relationship.

References


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