



Migration and Adjustment of Farm and Nonfarm Families and Adolescents in Cedar Rapids, Iowa

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SUMMARY

Previous research has shown that farm-to-urban migrants differ in various ways from urban-reared persons. Studies of differences among persons with a farm or rural background and urban-reared persons who now all live in the same urban areas have been lacking in Iowa. One of the purposes of this study was to provide such information for an Iowa metropolitan area. The main purpose, however, was to compare characteristics among adolescents from several family-migration types. These were adolescents who had always lived in Cedar Rapids (the metropolitan area selected for study), adolescents who had moved from other urban centers to Cedar Rapids and adolescents who had lived on farms at some previous time and now live in Cedar Rapids. These three family-migration types are referred to as urban-nonmigrant, urban-migrant and farm-to-urban migrant.

Data were obtained first by questionnaires from practically all adolescents in the seventh and eleventh grades of the Cedar Rapids schools. Questionnaires also were mailed to their parents. The comparisons among the children and parents in the three family-migration types were based on white families in which both parents were living with the adolescents who represented their families in the original sample. The urban-nonmigrant sample included 582 families, the urban-migrant sample included 391 families, and the farm-to-urban sample included 208 families.

Large differences existed among certain characteristics of the parents in the three family-migration types. Lowest median ages were observed for the farm-to-urban husbands and wives, the median ages for the urban-migrant spouses were intermediate, and the urban-nonmigrant spouses had the highest median ages. The educational levels of the farm-to-urban spouses were the lowest, those for the urban-nonmigrant were intermediate, and the urban-migrant spouses had the highest educational levels. The lowest levels of occupational achievement were observed among the farm-to-urban males, urban-nonmigrant males were next, and the urban-migrant males had the highest levels of occupational achievement. A large portion of the variation in the occupational achievement patterns among the three groups of men was associated with their educational differences, but differences associated with the migration types also remained. The men's ages were not significantly related to their occupational achievement levels.

Employment of wives was related to both the family-migration classification and family-status levels. There was virtually no difference in employment rates among the wives of the two urban family types. Approximately 50 percent of the wives in the urban-nonmigrant families and 48 percent of the wives in the urban-migrant families were employed.

A larger proportion of the farm-to-urban wives, 65 percent, were employed. The status levels of the wives' jobs were not associated with the family-migration types but were related to their family-status levels. Wives from higher status families, as defined by the husbands' occupations, were employed at higher status occupations more frequently than were wives from lower status families.

The farm-to-urban families had the highest median number of children under 18 years of age still at home, urban-migrant families were intermediate, and urban-nonmigrant families had the lowest median number of children under this age at home. A smaller proportion, 80 percent, of farm-to-urban families included both biological parents of the children as compared with 86 percent for the urban-migrant families and with 88 percent for the urban-nonmigrant families.

Four general hypotheses were tested for comparisons among the adolescents in the three family-migration types: (1) Indexes of parent-adolescent relations differ significantly among the adolescents in the three family-migration types. (2) Indexes of their parents' interests in the adolescents' school work and their parents' participation in the adolescents' school activities differ significantly among the three family-migration types. (3) Personality scores differ significantly among the adolescents in the three family-migration types. (4) The three groups of adolescents differ significantly in relation to selected school-related variables and community organization participation scores. The farm-to-urban children were expected to differ from the adolescents in the two urban family types. Various tests were made for each of the hypotheses. Data included item responses as well as mean scores.

Only 1 of the 24 tests of the first hypothesis, 2 of the 8 tests of the second hypothesis, 1 of the 4 tests of the third hypothesis and 1 of the 27 tests of the variables included in the fourth hypothesis permitted rejection of the null hypothesis for differences among the three groups of adolescents.

The conclusion for the comparisons among the three groups of adolescents is that possible differences in previous socialization patterns were not apparent after the adolescents had shared common experiences in the Cedar Rapids community and school systems. The data suggested that children with farm backgrounds accommodated themselves readily to new conditions encountered in urban areas. One possible exception to this generalization was the significantly higher rate of school absenteeism among the eleventh-grade farm-to-urban boys in comparison with the other eleventh-grade boys. The higher absenteeism could be related to higher school drop-out rates among the farm-to-urban boys. Further research is needed, however, to test the validity of this inference.

Migration and Adjustment of Farm and Nonfarm Families and Adolescents in Cedar Rapids, Iowa¹

by Lee. G. Burchinal and Perry E. Jacobson²

Population mobility is necessary for the efficient operation of the American urban-industrial society. On the whole, American society has benefited from migration though, at times, certain groups have and still must bear burdens imposed by migration. But most individuals and families accept or welcome migration because they believe that migration brings them enhanced status, a higher level of living or other benefits they desire. Some data describing occupational and residential changes in the United States illustrate the mobility of American families.

In a recent year, more than 8 million American workers changed jobs. These 8 million persons made approximately 11.5 million job changes. Also, about 7 percent of the male workers now are in a different county from the one in which they were employed the year before. More than half of this 7 percent changed states, as well as jobs (2, p. 281).

Job changes frequently are associated with residential changes. During any recent year, approximately 20 percent of American families changed their places of residence. Between 30 and 33 million persons have moved annually since World War II. Over 5 million persons have been involved annually in interstate moves (18, p. 154).

Much of this movement represents the continuation of the historic trend of population movement from rural areas or smaller towns to larger cities. Urban areas in the United States contained about 40 percent of our population in 1900. In 1960, 70 percent of the American population was in urban areas.

The growth of the metropolitan areas relative to other areas probably will continue. The kinds of occupations that are expected to increase most rapidly in the current decade generally are concentrated in the metropolitan areas. These occupations include professional, managerial and proprietary positions as well as clerical, sales and skilled or semiskilled jobs (23). By 1975, it is estimated that 75 to 80 percent of the American population will live in urban areas.

Members of the rural labor force have participated

actively in these occupational and residential changes. The farm labor force has been reduced by half since 1920. There has been a 40-percent decline in farm workers in the United States since 1940 (13, p. v.). Between 1950 and 1959, there was a net outmigration of approximately 7.2 million persons from farm to nonfarm residences. Migration from farms made up more than one-fourth of the nonfarm population growth between 1950 and 1959 (2, p. 269).

The movement of farm and other rural people to urban areas represents one form of adjustment to the complex conditions affecting American agriculture and rural communities. This historic pattern of migration undoubtedly will continue. However, future rates of farm-to-nonfarm or rural-to-urban migration will be influenced by explicit or implicit public policies related to maintaining or changing rural population levels. Recently, serious proposals have been presented which would encourage movement of persons from farm to nonfarm jobs (24, p. 158). Occupational changes, in many cases, will require geographical mobility as well.

It is always desirable to base public policy on the most valid knowledge available. Research data on the impacts of migration upon persons and families vary considerably in scope and depth. In this study, interest is focused primarily on farm-to-nonfarm migration patterns. Detailed data are available for the numbers of persons involved in farm-to-nonfarm migration, the nonfarm-to-farm migration and the net farm-to-nonfarm migration. Considerable knowledge also is available for the age and sex characteristics of rural-to-urban migrants. The adjustments of farm- or rural-to-urban migrants in urban areas are reported in some studies (1,6,7,18,26). Most of these data, however, are related to the occupational or status characteristics of males or to the social participation patterns of farm or rural migrants as contrasted to urban migrants or natives of the urban areas selected for study.

When families are involved in migration, children as well as parents must adapt to a new environment. Yet, there are no studies on the characteristics and adjustment patterns among children in farm- or rural-to-urban migrant families as contrasted to children in families who have moved from one urban

¹ Project 1440, Iowa Agricultural and Home Economics Experiment Station, Center for Agricultural and Economic Development cooperating.

² Lee G. Burchinal was associate professor of sociology and Perry E. Jacobson was a graduate assistant in the Department of Economics and Sociology, Iowa State University.

area to another or among children who have always lived in the same metropolitan area.

Knowledge of possible impacts of migration upon children should be useful in formulating public policy that affects or might affect migration rates. This information also, should be valuable to parents contemplating migration or who are redefining their family and community roles as a result of migration. Teachers, clergymen and other persons who have responsibilities for children and youth also may be able to benefit from knowledge about the impacts, if any, of migration upon children.

The main objective of this investigation was to provide some information about possible impacts of migration on adolescents. The research design also permitted retesting some previous generalizations about differences in parental characteristics of farm-to-urban migrant families in comparison with inter-urban-migrant families or with families who have lived in a metropolitan area for a long time.

HYPOTHESES

In this report, data for the parents and families of the adolescents are presented first. These data are limited to the ages, educational levels and occupations of the parents, the number of children at home and the parents' marital type—whether the marriage is a first marriage or remarriage for one or both parents. Hypotheses are not developed for the comparisons based on parental or family characteristics; however, the differences are reported since these variables may be relevant to the differences in children from different migration categories.

For this investigation, three family-migration types were defined. The data for developing these types were based on the residential histories of the children involved in the samples. These data were obtained by questionnaires which were completed by the children in their classrooms. The family-migration classification included the farm-to-urban, the urban-nonmigrant and the urban-migrant family types.

All children and, hence, their families, who reported that they had lived on a farm at some time in their lives were classified as farm-to-urban migrant families.

The families having children who always lived in Cedar Rapids (the metropolitan area selected for the study) were included in the urban-nonmigrant classification. This classification is valid for the children in these families, but it involves unknown degrees of error for their parents. Some of the parents in the urban-nonmigrant families undoubtedly moved to Cedar Rapids from other urban or rural areas.

The children who had lived in some other town before coming to Cedar Rapids are called urban-migrant children, and their families are referred to as urban-migrant families.

Further information about the sizes and numbers of towns in which the children had lived before coming to Cedar Rapids would have permitted a more precise description of the urban-migrant category. But we felt that the children, especially the seventh graders, would not be able to provide accurate or complete replies to such questions. Therefore, this category was based on two sets of replies: (1) that the children had not always lived in Cedar Rapids; and (2) that they had lived in a "town" before coming to Cedar Rapids. Living in a town was differentiated from living "in the country but not on a farm" or "living on a farm." Otherwise, information about the sizes of the towns was lacking.

Hypotheses for comparisons among the children in the three family-migration types may be derived from a general premise. This premise is that differences between the in-migrants and the natives in any social system are related directly to their previous differences in socialization experiences.

Children in the urban-nonmigrant and the urban-migrant groups were assumed to have had approximately comparable socialization experiences. Children in the two urban groups were known to differ in that one group of children had always lived in the same metropolitan area, while the other group had experienced at least one intercity move. They may be different in other characteristics as well. Tests of the parent and family data will permit some statement about the similarities or differences between the families of the children in the two urban types.

The socialization experiences of the farm-to-urban children probably were different in some ways from those of the children in the two urban family types. All of the children in the farm-to-urban families lived at least part of their lives on farms. As a result, they were exposed to rural social systems, attitudes, values and behavioral characteristics. When their parents moved, they very likely carried with them many attitudes, values and behavioral patterns of their previous rural life. Even though the children may have lived most of their lives in cities, it is possible that many of the children in the farm-to-urban migrant families continued to experience—through their associations with their parents, relatives and previous rural associates—influences that have been characteristic of rural rather than of urban communities.

The children in the farm-to-urban migrant families probably had greater adjustments to make than the urban-migrant children when they moved to a larger urban area such as Cedar Rapids. It is possible that the farm-to-urban children had to learn to participate in larger school and play groups, and they may have encountered new role definitions for interpersonal relationships in the family, school and community.

The preceding suppositions are based on the assumption that differences still exist between the

socialization processes of rural and urban social systems. Some sociologists believe that the recent, large increases in rural levels of living, the development of mass communication and transportation systems in the United States and the increasing contacts between rural and urban persons have led to the virtual elimination of differences between rural and urban family or community life.

While there undoubtedly has been a decline in rural and urban differences in family and community life, much data still supports two generalizations: (1) There still are sizable differences in the characteristics of rural and urban youth. (2) Some of these differences appear to put rural persons at a disadvantage to urban persons in relation to integration and successful competition in the urban social setting (1,6,7,12,18,26,11).

Available data support the generalization that socialization processes differ in rural and urban families and communities. The impact of the differences in the rural and urban socialization processes is observed in differences between rural-reared persons and urban-reared persons. If differences are observed among adults in the several migration categories, differences also should be observed between the children in the farm-to-urban migrant families and the children in the urban-migrant or urban-nonmigrant families. Four sets of variables were used for tests of differences among the children in the three family-migration types. The general hypotheses for these four sets of comparisons are:

1. Indexes of the quality of parent-adolescent relations differ significantly among the adolescents in the three family-migration types.
2. Indexes of their parents' interest in the adolescents' school work and their parents' participation in the adolescents' school activities differ significantly among the three family-migration types.
3. Personality scores differ significantly among the adolescents in the three family-migration types.
4. The three groups of adolescents differ significantly in relation to selected school-related variables and community organization participation scores.

Varying numbers of indexes are used in testing each of the four hypotheses. There are no theoretical or empirical grounds for expecting large differences between the children in the two urban categories, but, for the purposes of the analyses, these two groups are maintained. However, the farm-to-urban adolescents were expected to do less well or to report more difficulty for each set of data than the other children. Some of the data previously reviewed support the latter suggestion. In addition, there are several sets of data that directly pertain to the expectation that the farm-to-urban adolescents would differ from the other adolescents.

First, some data directly support rural-urban differences in family relationships and in personality

characteristics of the adolescents. Research data from the early 1930's (8) to the present (20) agree in finding less satisfactory parent-adolescent relations in rural families than in urban families. These data suggest that the farm-to-urban migrant adolescents would report less satisfactory relations with their parents than would the other adolescents.

Several studies also indicate that greater proportions of rural youth than urban youth report personality difficulties (11,12). These data suggest that the farm-to-urban adolescents would score less satisfactorily than the other youth on the emotional characteristics measured.

Another set of relationships supports the two sets of differences just described. Satisfaction with, or lack of tension over, family relationships, including parent-adolescent relationships, is directly related to the social status of the family. Also, more adequate personality adjustment is directly related to the social status of one's family.³

Previous studies agree in finding that farm-to-urban migrant families generally have lower status levels than urban-migrant or urban-nonmigrant families. Therefore, the children in the farm-to-urban migrant families as compared with the other children might be expected to report more difficulties in their relations with their parents and to reflect less satisfactory adjustment.

The expected lower status levels among the farm-to-urban families and the direct relationship between social status and participation of parents in formal social organizations suggest the basis for the remaining differences: (1) The farm-to-urban parents would be less actively involved in their children's school-related work and activities than the other parents. (2) The farm-to-urban adolescents in contrast to the other adolescents would be less involved in school and community organizations, have lower intelligence scores, receive lower school grades and be absent from school more frequently.

METHOD

The data used in the present investigation were derived from a study of relations between employment of mothers and the developmental characteristics of their children (4). The sample design developed for the maternal employment study was equally applicable to the investigation of possible differences in characteristics among adolescents in the three family-migration types.

Families with children were desired. We decided to include two age levels of children, those in the seventh and eleventh grades, to determine whether any differences associated with the migration experiences of the children were evident at either the earlier or later periods of adolescence. Because the

³ For extensive references and bibliographies on these relationships see Purchinal (5) and Sewell and Haller (25).

children are easily located through schools, families were selected on the basis of the children.

The second largest metropolitan area in Iowa, Cedar Rapids, was chosen as the locale for the investigation for two reasons: (1) Sample selection in one metropolitan area was desirable in terms of economy as contrasted to a sample drawn from a larger geographical area. (2) Cedar Rapids contains a wide diversification of industry and, hence, should provide for adequate social-status variations.

Practically 100 percent of all students in the two grades completed the questionnaires from which most of the data were taken. Students also provided the name, address and phone number of their parents or guardians on small cards attached to the questionnaires. Each card bore a code number which also was stamped on the corresponding questionnaire. On the basis of the information provided on these cards, a 3-page questionnaire was mailed to the parents to obtain the parental and family data. After follow-up letters and supplemental interviews with families who had not returned the questionnaires, 91 percent of the original 1,824 parental questionnaires were completed. However, the number of cases for which data are reported in this discussion is less than the number of questionnaires originally completed. Some of the childrens' or parents' questionnaires were deleted after careful editing and the imposition of several control variables. Nonwhite families and families in which the child was not living with both of his biological parents also were deleted from the samples.⁴

Development of the three migration types has been described. But these three types were not exhaustive of all possible migration types. For instance, the families of some children moved from farm to rural-nonfarm residences, from rural-nonfarm to Cedar Rapids residences or the reverse of either of these. These and several other migration types were excluded because only a small number of cases were found for each. Also, there were no theoretical grounds for expecting or interpreting differences among types other than the three selected for the present study.

⁴ Families where children are not living with both of the biological parents are included in the first comparison based on parental or family data.

PARENT AND FAMILY DIFFERENCES AMONG THE THREE FAMILY-MIGRATION TYPES

Family Characteristics

Marital Type

Five marital types, based on the present and previous marital status of the parents, are shown in table 1. Because divorce is less common among rural than among urban families (18), the farm-to-urban families were expected to include a larger proportion of families where both parents were still living with their children. These families are referred to as intact families.

Contrary to what was expected, the smallest percent of intact families was observed for farm-to-urban migrant families. The largest percent of intact families was observed for the urban-nonmigrant families. However, the range between the largest and smallest percentages for intact families was only 8 percent.

The total chi-square for the frequencies reported in table 1 was significant at the 5-percent level. The percentages for the two urban types generally were similar for each marital type, and the percentages for the farm-to-urban migrant families were lower for the intact families and generally higher for each of the other marital types. In all subsequent analyses, only intact families are used.

Number of Children at Home

Traditionally, farm families have had higher reproduction rates than urban families (16, pp. 211-214). The farm-to-urban migrant families might be expected, therefore, to have a greater number of children than the other families. This hypothesis was tested only for the number of children who were under 18 years of age and who were still at home.

Results presented in table 2 for each grade-level sample include percentage distributions for the number of children and the median number of children at home for each family type.

Differences in the percentage distributions do not need elaboration. The median number of children at home under 18 provides a summary of the frequency and percentage distributions. Among families

Table 1. Percentages for marital types by the family-migration types.

| Marital types | Urban-nonmigrant | | Urban-migrant | | Farm-to-urban | | Total | |
|---|------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| First marriages for both parents | 582 | 88.1 | 391 | 86.3 | 208 | 80.0 | 1,181 | 85.9 |
| Widow to first-married or divorced man or widower | 8 | 1.2 | 11 | 2.4 | 10 | 3.8 | 29 | 2.1 |
| First-married man to divorced woman | 22 | 3.3 | 15 | 3.2 | 16 | 6.2 | 53 | 3.9 |
| Widower or divorced man to first-married woman | 21 | 3.2 | 16 | 3.5 | 8 | 3.1 | 45 | 3.3 |
| Widower or divorced man to divorced woman | 28 | 4.2 | 21 | 4.6 | 18 | 6.9 | 67 | 4.8 |
| Total | 661 | 100.0 | 454 | 100.0 | 260 | 100.0 | 1,375 | 100.0 |

$X^2 = 15.30$, $df = 8$, $P = 0.05$.

Table 2. Percentages for number of children under 18 years of age and at home by the family-migration types within the seventh- and eleventh-grade samples.

| Number of children | Urban-non-migrant | | Urban-migrant | | Farm-to-urban | | Total | |
|----------------------------|-------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| Seventh-grade sample | | | | | | | | |
| 1 | 68 | 18.6 | 21 | 10.7 | 14 | 12.0 | 103 | 15.2 |
| 2 | 141 | 38.8 | 73 | 37.3 | 36 | 30.7 | 250 | 37.0 |
| 3 | 87 | 23.8 | 63 | 32.1 | 35 | 29.9 | 185 | 27.2 |
| 4 | 48 | 13.1 | 28 | 14.3 | 11 | 9.4 | 87 | 12.8 |
| 5 or more | 21 | 5.7 | 11 | 5.6 | 21 | 18.0 | 53 | 7.8 |
| Total | 365 | 100.0 | 196 | 100.0 | 117 | 100.0 | 678 | 100.0 |
| Median | 2.8 | | 3.1 | | 3.2 | | 2.9 | |
| $X^2=31.53, df=8, P<0.01.$ | | | | | | | | |
| Eleventh-grade sample | | | | | | | | |
| 1 | 87 | 40.1 | 55 | 28.5 | 24 | 26.7 | 166 | 33.2 |
| 2 | 70 | 32.3 | 67 | 34.7 | 28 | 31.1 | 165 | 33.0 |
| 3 | 31 | 14.3 | 44 | 22.8 | 23 | 25.5 | 98 | 19.6 |
| 4 | 12 | 5.5 | 14 | 7.3 | 8 | 8.9 | 34 | 6.8 |
| 5 or more | 17 | 7.8 | 13 | 6.7 | 7 | 7.8 | 37 | 7.4 |
| Total | 217 | 100.0 | 193 | 100.0 | 90 | 100.0 | 500 | 100.0 |
| Median | 2.3 | | 2.6 | | 2.8 | | 2.5 | |
| $X^2=13.04, df=8, P>0.05.$ | | | | | | | | |

having children in either grade level, the highest medians were observed for the farm-to-urban families; the intermediate medians were found for the urban-migrant families, and the lowest medians, for the urban-nonmigrant families.

The differences for the families with seventh-grade children were significant, but those for the families with the older children were not. Later results indicate that large social-status differences existed among the three types of families. The farm-to-urban families had the lowest status levels, the urban-nonmigrant families were intermediate, and the urban-migrant families had the highest status levels.

Generally, reproduction rates are inversely related to status. The median family sizes for the farm-to-urban migrant category were consistent with the greater rural reproduction rates and the lower status position of the farm-to-urban migrant families. However, among the two urban family types, there was a reversal in the expected ranking of median family sizes in relation to the family social-status levels. The reversal in median family sizes between the two urban types may be related to age differences of the

parents in the two urban family types. The urban-migrant parents were younger, on the average, than the parents whose children were born in Cedar Rapids. The younger urban-migrant couples may have larger families than the slightly older urban-nonmigrant families. Or, the latter may have had families as large as or larger than the former, but more of the children in the urban-nonmigrant families may have left home. Further data were not available to explain the reproduction differences between the two urban family types.

Characteristics of Husbands

Ages of Husbands

Percentage distributions and the median ages of husbands in the three migrant types are given in table 3. In general, the three percentage distributions are similar. Approximately 60 percent of the farm-to-urban men and the urban-migrant men were between 35 and 44 years of age. Approximately 60 percent of the urban-nonmigrant men were between 40 and 49 years of age. The percentage distribution variations are reflected in the median ages. The median for the farm-to-urban men was the lowest, followed by the urban-migrants, and the median for the urban-nonmigrants was the highest. The chi-square based on the three frequency distributions was highly significant.

Education of Husbands

Significant differences were found for the educational levels of the husbands in the three migrant categories. As shown in table 4, the farm-to-urban men generally had the fewest years of formal education, the urban-nonmigrant men were intermediate, and the urban-migrant men had the greatest amount of formal education. Percentage differences among the men in the three migrant categories were most striking at the extremes of the educational continuum. Approximately 33 percent of the farm-to-urban migrants had 9 or fewer years of education. This was true for approximately 18 percent of the urban-nonmigrant men and for 9 percent of the urban-migrant men. At the other extreme, 5 percent of the farm-to-urban migrant men, 14 percent of the urban-nonmigrant men and 33 percent of the urban-migrant men had college or post-college levels of education.

Table 3. Percentage distributions for ages of husbands by the family-migration types.

| Ages | Urban-non-migrant | | Urban-migrant | | Farm-to-urban | | Total | |
|---------------|-------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| 34 or younger | 20 | 3.5 | 9 | 2.3 | 16 | 7.7 | 45 | 3.8 |
| 35-39 | 105 | 18.0 | 103 | 26.3 | 63 | 30.3 | 271 | 22.9 |
| 40-44 | 198 | 34.0 | 144 | 36.9 | 66 | 31.8 | 408 | 34.6 |
| 45-49 | 136 | 23.4 | 79 | 20.2 | 40 | 19.2 | 255 | 21.6 |
| 50-54 | 80 | 13.7 | 42 | 10.7 | 14 | 6.7 | 136 | 11.5 |
| 55 and older | 43 | 7.4 | 14 | 3.6 | 9 | 4.3 | 66 | 5.6 |
| Total | 582 | 100.0 | 391 | 100.0 | 208 | 100.0 | 1,181 | 100.0 |
| Median | 44.2 | | 42.9 | | 41.9 | | 43.4 | |

$X^2=40.22, df=10, P<0.01.$

Table 4. Percentage distributions for the education of husbands by the family-migration types.

| Education of husbands | Urban-nonmigrant | | Urban-migrant | | Farm-to-urban | | Total | |
|------------------------------------|------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| Graduate or professional education | 30 | 5.2 | 63 | 16.1 | 4 | 1.9 | 97 | 8.2 |
| College graduate | 51 | 8.8 | 65 | 16.6 | 7 | 3.4 | 123 | 10.4 |
| Some college | 98 | 16.9 | 78 | 19.9 | 22 | 10.6 | 198 | 16.8 |
| High school graduate | 207 | 35.3 | 106 | 27.3 | 73 | 35.1 | 386 | 32.7 |
| 10 to 11 years | 94 | 16.2 | 42 | 10.7 | 34 | 16.3 | 170 | 14.4 |
| 9 years or less | 102 | 17.6 | 37 | 9.4 | 68 | 32.7 | 207 | 17.5 |
| Total | 582 | 100.0 | 391 | 100.0 | 208 | 100.0 | 1,181 | 100.0 |

$X^2=132.19, df=10, P<0.01.$

The chi-square for educational differences among the three groups of men was highly significant.

Occupations of Husbands

The occupations of the husbands were classified by the code described in table 5.

In comparison with the other men, the farm-to-urban men were underrepresented in the higher status occupations and were overrepresented in the lower status occupations. Highest levels of occupational achievement were found for the urban-migrants. The occupational achievement of the urban-nonmigrant males was intermediate between the farm-to-urban males and the urban-migrant males. The chi-square for the occupational achievement patterns of the three categories of men was highly significant.

The most notable differences in occupational achievement levels were observed at the extremes of the occupational continuum. Three percent of the farm-to-urban males were included among the higher executives and major professionals, as were approximately 9 percent of the urban-nonmigrant men and 19 percent of the urban-migrants. Wide ranges in percentage differences, but with the same rank-order, were observed for the next two lower occupational classes—the business managers or proprietors of medium-sized businesses and the administrative personnel, owners of small independent businesses or minor professionals. Similar percentages were found for the farm-to-urban males and the urban-migrant males in the occupational class composed of clerical, sales and technical workers. At the skilled manual level, the percentages for the farm-to-urban males and the urban-nonmigrant males were approximately equal. And, for the lowest two occupational classes, the percentages for the farm-to-urban males were highest, followed by those for the urban-nonmigrant males, and were least among the urban-migrant males. Approximately 16 percent of the farm-to-urban males were employed at unskilled jobs compared with 6 percent and 5 percent, respectively, for the urban-nonmigrant or urban-migrant males.

The medians shown at the bottom of table 5 summarize the differences in the occupational percentage distributions. In keeping with the Hollingshead

method of developing social-status scores, weights were assigned inversely with the status of the occupations. These weights are shown in parentheses following each occupational class. Because of this weighting system, the lower median scores represent higher occupational achievement. The lowest median was observed for the urban-migrant males, the median for the urban-nonmigrant males was intermediate, and the highest median was observed for the farm-to-urban males.

Ages, Education and Occupations of Husbands

Occupational achievement is a function of many variables. Data have been presented for two variables that influence occupational achievement. These are ages and educational levels. The median age of the farm-to-urban males was the lowest of the three groups, and these men generally had the lowest levels of education as well. These two factors may explain why the farm-to-urban men had the lowest levels of occupational achievement. Though slightly older than the urban-migrant men, the lower educational levels of the urban-nonmigrant men may explain the greater occupational achievement of the urban-migrant men over the urban-nonmigrant men.

Because age and education undoubtedly are separately and jointly related to the occupational achievement patterns, the occupational achievement levels of the men in the three migration categories were determined for subsamples which were made more homogeneous on age and educational levels. The results for the 18 subsamples created by the dichotomy on age, the trichotomy on education and the trichotomy on migration type are shown in table 6.

In addition to the percentage distributions reported in table 6, median occupational achievement levels were calculated for all subsamples. The medians were based on the weights given in the parentheses in table 5. The 18 median occupational achievement levels for each subsample were used in an analysis of variance test. The analysis of variance was conducted to determine which factors or combinations of factors influenced the occupational

Table 5. Percentage distributions for the occupational achievement of husbands by the family-migration types.

| Occupational achievement | Urban-nonmigrant | | Urban-migrant | | Farm-to-urban | | Total | |
|--|------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| Higher executives, major professionals (1) -- | 52 | 8.9 | 74 | 18.9 | 7 | 3.4 | 133 | 11.3 |
| Business managers, proprietors of medium-sized businesses (2) ----- | 47 | 8.1 | 54 | 13.8 | 8 | 3.8 | 109 | 9.2 |
| Administrative personnel, owners of small businesses, minor professionals (3) ---- | 115 | 19.7 | 87 | 22.3 | 17 | 8.2 | 219 | 18.5 |
| Clerical and sales workers and technicians (4) ----- | 82 | 14.1 | 70 | 17.9 | 37 | 17.8 | 189 | 16.0 |
| Skilled manual workers (5) ----- | 181 | 31.2 | 67 | 17.1 | 69 | 33.2 | 317 | 26.8 |
| Semiskilled workers (6) ----- | 71 | 12.2 | 19 | 4.9 | 36 | 17.3 | 126 | 10.7 |
| Unskilled workers (7) ----- | 34 | 5.8 | 20 | 5.1 | 34 | 16.3 | 88 | 7.5 |
| Total ----- | 582 | 100.0 | 391 | 100.0 | 208 | 100.0 | 1,181 | 100.0 |
| Median ^a ----- | | 4.9 | | 3.8 | | 5.5 | | 4.7 |

$\chi^2 = 139.00$, $df = 14$, $P < 0.01$.

^a The medians were calculated from the scores shown in the parentheses following each occupational class title. These scores are based on the Hollingshead occupational status code (14).

Table 6. Percentage distributions for the occupational achievement of husbands by the family-migration types and the ages and educational levels of the husbands.

| Education | Occupational achievement ^a | All men | | | | | | | | | | | |
|--|---------------------------------------|------------------------|---------|---------------|---------|---------------|---------|----------------------|---------|---------------|---------|---------------|---------|
| | | Husbands 44 or younger | | | | | | Husbands 45 or older | | | | | |
| | | Urban-nonmigrant | | Urban-migrant | | Farm-to-urban | | Urban-nonmigrant | | Urban-migrant | | Farm-to-urban | |
| | | N | Percent | N | Percent | N | Percent | N | Percent | N | Percent | N | Percent |
| Elementary or some high school | Low | 32 | 33.3 | 16 | 32.0 | 31 | 12.5 | 32 | 32.0 | 6 | 20.7 | 20 | 69.0 |
| | Middle | 52 | 54.2 | 27 | 54.0 | 37 | 50.7 | 37 | 57.0 | 15 | 57.7 | 64 | 55.6 |
| | High | 13 | 12.5 | 7 | 14.0 | 5 | 6.8 | 11 | 17.0 | 8 | 27.6 | 109 | 31.0 |
| | Total | 96 | 100.0 | 50 | 100.0 | 73 | 100.0 | 100 | 100.0 | 29 | 100.0 | 196 | 100.0 |
| High school graduate | Low | 17 | 12.9 | 12 | 14.1 | 12 | 22.6 | 14 | 18.7 | 3 | 11.3 | 31 | 30.0 |
| | Middle | 78 | 59.1 | 42 | 49.4 | 34 | 64.2 | 31 | 41.3 | 8 | 38.1 | 13 | 68.0 |
| | High | 31 | 28.0 | 31 | 36.5 | 7 | 13.2 | 30 | 40.0 | 10 | 47.6 | 109 | 52.6 |
| | Total | 132 | 100.0 | 85 | 100.0 | 53 | 100.0 | 75 | 100.0 | 21 | 100.0 | 207 | 100.0 |
| Some college, college graduate, or post-graduate education | Low | 6 | 4.9 | 1 | 4.5 | 1 | 5.3 | 4 | 4.8 | 1 | 4.2 | 0 | 5.6 |
| | Middle | 25 | 26.3 | 24 | 19.8 | 6 | 31.5 | 20 | 23.8 | 21 | 24.7 | 7 | 25.1 |
| | High | 61 | 67.4 | 96 | 79.4 | 12 | 63.2 | 60 | 71.4 | 63 | 74.1 | 174 | 69.3 |
| | Total | 95 | 100.0 | 121 | 100.0 | 19 | 100.0 | 84 | 100.0 | 85 | 100.0 | 179 | 100.0 |
| | Median | | 3.4 | | 2.7 | | 3.4 | | 2.9 | | 2.8 | | 4.0 |

^a Low includes semiskilled and unskilled workers; middle includes skilled manual workers, clerical, sales and technical workers; high includes professional, managers and proprietors (see table 5).

^b Medians were calculated in the same manner as described in table 5.

Table 7. Analysis of variance results for the analysis of occupational achievement medians by family-migration types, ages and educational levels of the male heads.

| Effects | Degrees of freedom | Mean squares | F ratios ^a |
|------------------------------------|--------------------|--------------|-----------------------|
| Age | 1 | 0.0089 | 0.2560 |
| Migration type | 2 | 1.2350 | 35.5682** |
| Education | 2 | 9.8617 | 284.0178** |
| Age by migration type | 2 | 2.3389 | 6.7360 |
| Age by education | 2 | 0.0072 | 0.2080 |
| Migration type by education | 4 | 0.0292 | 0.8400 |
| Age by migration type by education | 4 | 0.0347 | ----- |
| Total | 17 | ----- | ----- |

^a The 3-way interaction term was used as the denominator in all ratios.

** Significant at the 1-percent level.

achievement levels. The results of the 3-way analysis of variance are given in table 7.

In the analysis of variance, the 3-way interaction term was used as the error term. As can be seen in table 7, the 3-way interaction term included a relatively small portion of the total variance. None of the two-way interactions was statistically significant. Among the three main effects, the migration type and educational levels produced significant results, with the educational effect being considerably greater than the effect associated with migration. The medians apparently were not related to the age dichotomy.

The substantive meaning of the analysis of variance results can be determined from the data in table 6. Only the data for the total sample of men, disregarding age, need be inspected. In each of the three educational levels, the lowest medians, which represented highest occupational achievement, were observed for the urban-migrant males; the medians for the urban-nonmigrant males were next, and the medians for the farm-to-urban males were highest. Relative to the other men, in each of the three educational levels, the farm-to-urban males were underrepresented in the high status levels and were overrepresented in the middle or low status levels. Also, in each of the three comparisons based on educational levels, the urban-nonmigrant men were overrepresented in the low status levels and were underrepresented in the high status levels relative to the urban-migrant men.

Since large differences in occupational achievement occur between migration types — even when age and education are controlled — age and educational differences among the three categories of men do not explain why the urban-migrant men had the highest levels of occupational achievement, why the urban-nonmigrant men were intermediate or why the farm-to-urban males had the lowest levels of occupational achievement. Other factors must account for these differences.

Characteristics of Wives

Ages of Wives

Ages of husbands and wives generally are highly correlated. It was not surprising, therefore, that

Table 8. Percentage distributions for ages of wives by the family-migration types.

| Ages | Urban-non-migrant | | Urban-migrant | | Farm-to-urban | | Total | |
|---------------|-------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| 34 or younger | 48 | 8.3 | 41 | 10.5 | 36 | 17.4 | 125 | 10.6 |
| 35-39 | 175 | 30.1 | 129 | 33.2 | 91 | 43.9 | 395 | 33.5 |
| 40-44 | 187 | 32.2 | 131 | 33.7 | 43 | 20.8 | 361 | 30.7 |
| 45-49 | 113 | 19.4 | 60 | 15.4 | 23 | 11.1 | 196 | 16.7 |
| 50 and older | 58 | 10.0 | 28 | 7.2 | 14 | 6.8 | 100 | 8.5 |
| Total | 581 | 100.0 | 389 | 100.0 | 207 | 100.0 | 1,177 | 100.0 |
| Median | 41.8 | | 40.9 | | 38.7 | | 40.9 | |

$\chi^2=38.83$, $df=8$, $P<0.01$.

the age distributions and median ages of wives in the three family-migration types were similar to those already described for their husbands. The median age for the farm-to-urban wives was the lowest, the median for the urban-migrant wives was intermediate, and the median for the urban-nonmigrant wives was the highest.

The chi-square for the three age distributions reported in table 8 was highly significant.

Education of Wives

A highly significant relationship was observed between the family-migration classification and the educational levels of wives. Farm-to-urban wives were the least well educated; the wives in the urban-nonmigrant families were intermediate, and the wives in the urban-migrant families were the most highly educated. As shown in table 9, smaller percentages of the farm-to-urban wives than the other wives were high school graduates and had any education beyond high school. Larger percentages of farm-to-urban wives than the other wives had less than 11 years of education. In comparison with the wives in the urban-nonmigrant families, greater proportions of the urban-migrant wives had 13 or more years of education, and smaller percentages had 12 or fewer years of education.

Occupations of Wives

Data for the employment status of the wives in the three family-migration types are given in table 10. Families in each migration type were divided into high and low status levels on the basis of the husbands' occupations, thereby creating six subsamples. Two percentage distributions are reported in table 10 for each of the six migration and status subsamples as well as for all high and low status families and for the total sample. In the first row of the table, percentages are listed for the women who were not

employed at the time of the survey (May and June 1959). In the remainder of the upper half of table 10, percentages are reported for the wives by the occupational prestige of the job in which they were employed. In the lower part of table 10, percentages are given for the number of employed women whose occupations were defined as high versus low status.

It was expected that the wives in the farm-to-urban families would be less frequently employed than the other wives and, that if they were employed, the farm-to-urban wives would more frequently be employed in lower status occupations than the other wives.

The total chi-squares, based on the migration and family-status levels were significant for both sets of analyses: (1) For the employed versus nonemployed status, $\chi^2=27.08$, $df=5$, $P<0.01$. (2) For the comparison based on the status levels of the wives' jobs, $\chi^2=41.50$, $df=5$, $P<0.01$.

Since the total chi-squares were significant for both analyses, the total chi-square results were partitioned according to the effects resulting from the migration trichotomy, those resulting from the family-status dichotomy and the residual between the sum of the migration and status chi-squares and the total chi-square. A method described by Kimball (17) was used in these analyses. The results of the chi-square partition analyses are reported in table 11.

Neither of the residual chi-squares was significant. This permitted examination of the chi-squares for the migration and status variables. Family-migration type and status levels were both significantly related to the employment versus nonemployment classification. Contrary to the hypothesis, in both status levels, larger percentages of the wives in the farm-to-urban migrant families than the other wives were employed. Among all farm-to-urban migrant wives, approximately 65 percent were employed, whereas 48 percent of the urban-migrant wives and 50 percent of the urban-nonmigrant wives were employed.

The partitioned chi-squares listed in table 11 indicated that family status had a stronger relationship with the employment versus nonemployment dichotomy than did migration type. As shown in table 10, a greater proportion of the wives from high status families were employed than were the wives from low status families.

Family-migration type was not significantly related to the status of the jobs of the employed wives. Family-status level was highly related to the status

Table 9. Percentage distributions for the education of wives by the family-migration types.

| Education | Urban-nonmigrant | | Urban-migrant | | Farm-to-urban | | Total | |
|------------------------------------|------------------|---------|---------------|---------|---------------|---------|-------|---------|
| | N | Percent | N | Percent | N | Percent | N | Percent |
| Graduate or professional education | 11 | 1.9 | 10 | 2.6 | 1 | 0.5 | 22 | 1.9 |
| College graduate | 45 | 7.7 | 52 | 13.3 | 8 | 3.8 | 105 | 8.9 |
| Some college | 138 | 23.7 | 120 | 30.8 | 46 | 22.1 | 304 | 25.7 |
| High school graduate | 239 | 41.2 | 150 | 38.2 | 75 | 36.2 | 464 | 39.3 |
| 10 to 11 years | 29 | 5.0 | 29 | 7.4 | 41 | 19.7 | 160 | 13.5 |
| 9 years or less | 59 | 10.1 | 30 | 7.7 | 37 | 17.7 | 126 | 10.7 |
| Total | 582 | 100.0 | 391 | 100.0 | 208 | 100.0 | 1,181 | 100.0 |

$\chi^2=57.14$, $df=10$, $P<0.01$.

Table 10. Percentage distributions for employment of wives by the family-migration types and family-status levels.^a

| | Urban-nonmigrant | | | | | | Urban-migrant | | | | | | Farm-to-urban | | | | | | Total | | | | | | | | | |
|---|------------------|---------|--|------------|---------|-----|---------------|---------|-------|------------|---------|-----|---------------|---------|-------|------------|---------|-----|-------------|---------|--|------------|---------|--|-------|---------|--|--|
| | High status | | | Low status | | | High status | | | Low status | | | High status | | | Low status | | | High status | | | Low status | | | Total | | | |
| | N | Percent | | N | Percent | | N | Percent | | N | Percent | | N | Percent | | N | Percent | | N | Percent | | N | Percent | | N | Percent | | |
| Not employed ^b | 111 | 54.9 | | 93 | 45.0 | 106 | 57.3 | 31 | 39.7 | 22 | 47.8 | 34 | 30.4 | 239 | 55.2 | 158 | 39.9 | 397 | 47.9 | | | | | | | | | |
| Business managers, proprietors of medium-sized businesses | 8 | 4.0 | | 7 | 3.4 | 12 | 6.5 | 1 | 1.3 | 2 | 4.3 | 2 | 1.8 | 22 | 5.1 | 10 | 2.5 | 32 | 3.8 | | | | | | | | | |
| Administrative personnel, owners of small businesses, minor professionals | 11 | 5.4 | | 8 | 3.9 | 13 | 7.0 | 1 | 1.3 | 5 | 10.9 | | | 29 | 6.7 | 9 | 2.3 | 38 | 4.6 | | | | | | | | | |
| Clerical and sales and technicians | 49 | 24.3 | | 36 | 17.5 | 36 | 19.5 | 22 | 28.2 | 12 | 26.2 | 23 | 20.5 | 97 | 22.4 | 81 | 20.4 | 178 | 21.5 | | | | | | | | | |
| Semiskilled workers | 15 | 7.4 | | 8 | 3.9 | 3 | 1.6 | 2 | 2.6 | 3 | 6.2 | 7 | 6.2 | 3 | 0.7 | 17 | 4.3 | 20 | 2.4 | | | | | | | | | |
| Unskilled workers | 8 | 4.0 | | 37 | 18.0 | 8 | 4.3 | 17 | 21.8 | 3 | 6.5 | 33 | 29.5 | 26 | 6.0 | 87 | 22.0 | 113 | 13.6 | | | | | | | | | |
| Total | 202 | 100.0 | | 17 | 8.3 | 7 | 3.8 | 4 | 5.1 | 2 | 4.3 | 13 | 11.6 | 17 | 3.9 | 34 | 8.6 | 51 | 6.2 | | | | | | | | | |
| | | | | 206 | 100.0 | 185 | 100.0 | 78 | 100.0 | 46 | 100.0 | 112 | 100.0 | 433 | 100.0 | 396 | 100.0 | 829 | 100.0 | | | | | | | | | |
| Status levels for the occupations of the employed wives | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| High | 68 | 74.7 | | 59 | 52.2 | 64 | 81.0 | 26 | 55.3 | 19 | 79.2 | 32 | 41.1 | 151 | 77.8 | 117 | 49.2 | 268 | 62.0 | | | | | | | | | |
| Low | 23 | 25.3 | | 54 | 47.8 | 15 | 19.0 | 21 | 44.7 | 5 | 20.8 | 46 | 58.9 | 43 | 22.2 | 121 | 50.8 | 164 | 38.0 | | | | | | | | | |
| Total | 91 | 100.0 | | 113 | 100.0 | 79 | 100.0 | 47 | 100.0 | 24 | 100.0 | 78 | 100.0 | 194 | 100.0 | 238 | 100.0 | 432 | 100.0 | | | | | | | | | |

^a The status dichotomy was based on the occupations of the husbands as reported in table 5. The high status category included families where the husbands' occupations were in the top three occupational classes in table 5. These occupations are shown with a 1, 2 or 3 in parentheses following the occupational classes. The low status category included families where the husbands' occupations were in the lower four occupational classes as shown in table 5.

^b A chi-square was calculated for employment versus nonemployment for the 12 cells generated by the employment and status dichotomies and the migration trichotomy. The result was $\chi^2 = 27.08$, $df = 5$, $P < 0.01$.

^c For the wives' occupations, low status included the semiskilled and unskilled workers. All other occupations were included in the high-status category. The chi-square based on the status dichotomies for the wives' occupations and those of their husbands and the migration trichotomy was 41.50, $df = 5$, $P < 0.01$.

Table 11. Results of the partition of the total chi-squares by family-migration types and status levels for employment versus nonemployment of wives and for the status levels of wives' jobs.

| Source of variation | Degrees of freedom | Employment versus nonemployment χ^2 | Status of the wives' jobs χ^2 |
|---------------------|--------------------|--|------------------------------------|
| Total | 5 | 27.08** | 41.50** |
| Migration types | 2 | 7.61* | 1.95 |
| Status levels | 1 | 18.42** | 37.46** |
| Residual | 2 | 1.05 | 2.09 |

* Significant at the 5-percent level.
 ** Significant at the 1-percent level.

of the wives' occupations. As shown in table 11, the chi-square associated with family status accounted for most of the total chi-square for variations in the status levels of the wives' occupations. Table 10 shows that about 78 percent of the wives from high status families had high status jobs themselves, whereas this was true for only 49 percent of the wives from low status families.

Discussion of Parent and Family Characteristics

The differences among the occupational achievement patterns of the husbands are the most significant sociological data derived from the analyses of characteristics of parents and families. Even when educational levels and ages were controlled, lower occupational achievement patterns were found among the farm-to-urban migrant males in comparison with the other males. These data suggest that differences other than those associated with formal education or age account for the differences in the occupational achievement patterns among the three groups of men. Additional research is needed to specify what variables, among the many that influence occupational attainment, are most strongly related to the occupational differences between the farm- or rural-reared males and urban-reared males.

These occupational achievement differences were observed despite sample limitations which should have tended to reduce differences among men in the three family-migration types. The family-migration types were based on family residence patterns during the lives of seventh-grade or eleventh-grade children. The urban-nonmigrant families were nonmobile during the lives of the children from the families who were represented by each grade-level sample. However, some of the urban-nonmigrant families, as defined in this study, undoubtedly had been urban-migrant families before the birth of the particular child (or children) who represented the families in the two grade levels. Some of the urban-nonmigrant families may have been farm-to-urban migrant families or, at least, the fathers in these families may have been farm- or rural-reared men. Some of the urban-migrant fathers may have been reared on farms or in rural areas as well. It is not known how

imperfectly the family-migration types reflected the socialization and previous residence experiences of the fathers. Yet, despite these methodological limitations, large and significant differences were observed for the occupational attainment of the men in the three migration categories.

All results of this investigation further confirmed the generalization that farm-reared males compete less effectively, in terms of occupational attainment, with urban-reared males.

Differences in employment rates among the wives in the three family-migration types were contrary to expected differences in rural-urban socialization. Other research in Iowa suggests that norms against the employment of wives are considerably stronger among rural than among urban groups (3). Yet higher rates of employment were observed among the wives in the farm-to-urban families than among the other wives. Differences in the employment rates of wives in the three family-migration types suggest that the stronger rural norms against employment of wives are not retained by the former farm wives, and probably not by their husbands, when they move to a metropolitan area. Is the reverse in employment rates among the farm-to-urban wives due to selectively associated with migration, changes in reference groups by these wives or some combination of these and other factors? Additional research is needed to answer these questions.

Despite differences in the wives' educational levels and ages, the status variations among the wives' jobs are not related to the family-migration classification. These results apparently indicate that the educational attainment of wives is related less to their occupational opportunities and consequent occupational status than is true for their husbands. Such results should be expected because employment of wives still remains secondary to the major home and child-rearing responsibilities of wives in the United States. The males' jobs, on the other hand, represent their major life-role patterns.

The other findings generally were in agreement with previous data. The spouses in the farm-to-urban migrant families were younger, less well educated and had larger families than those in the two urban family types. The slight difference in the percentages of intact families, however, was contrary to what was expected in terms of generally established rural-urban differences in family stability. The farm-to-urban migrant category had the lowest percentage of intact families. Although the differences were small, the fact that the highest percentage of intact families was observed for the urban-nonmigrant families may suggest that migration for some of the spouses in the present urban-migrant families or the farm-to-urban families was associated with some form of previous family disruption, notably a previous divorce for either husband or wife or both.

FAMILY MIGRATION AND CHARACTERISTICS OF ADOLESCENTS

Parent-Adolescent Relationships

The 12 items used to measure the children's reports of their relations with their parents were taken from the Nye parent-adolescent relationship scales (21). Because these items did not form a scale for the present sample, responses to each item were analyzed separately.⁵

The hypothesis is that the responses to the 12 items by the children in the three migration categories differ significantly. In particular, the children in the farm-to-urban families were expected to report greater indications of difficulty in their relations with their parents than were the other children.

Since family social status generally is related to intra-family relationships, this variable was controlled in all analyses. The family-status dichotomy was based on the fathers' occupations. The high status level included families where the fathers were employed as higher executives, major or minor professionals, managers or proprietors. These occupations are shown as the top three occupational classes in table 5. The low status level included families where the fathers were employed as salesmen, clerical, technical, skilled, semiskilled or unskilled workers. The latter categories are shown as the last four occupational classes in table 5. Data from boys and girls were combined in all analyses.

Thus, each of the analyses for the 12 items were based on the three migration categories, each divided into two status levels and, in all cases, responses to each item were dichotomized. The first test of significance for the responses to the items was based on the total chi-square for the 12 cells just described. Each analysis, based on the 5 degrees of freedom, was conducted separately for the seventh-grade and the eleventh-grade samples.

The total chi-square results were nonsignificant for eight of the parent-adolescent items in both the seventh- and eleventh-grade samples. Tables of responses based on the 3-way interaction of the migration category, status levels and the dichotomy for the item responses are omitted since the total chi-squares were nonsignificant for these items. Instead, percentage distributions for the particular responses of the total seventh- and eleventh-grade samples are given in the parentheses following the items.

The eight items for which the total variation was nonsignificant in both grade-level samples were:

1. When you have a problem, do you talk it over with your father? (Always or usually — 7th, 37.1; 11th, 16.5. Sometimes, seldom or never — 7th, 62.9; 11th, 83.5.)

2. When you have a problem, do you talk it over with your mother? (Always or usually — 7th, 65.5;

⁵ For details regarding the reproducibility coefficients for the parent-adolescent relationship scores, see Burchinal (4) or Jacobson (15).

11th, 45.2. Sometimes, seldom or never — 7th, 34.5; 11th, 54.8.)

3. How often does your mother understand what you like to do? (Most of the time — 7th, 73.5; 11th, 68.0. Sometimes, not very often or never — 7th, 26.5; 11th, 32.0.)

4. How often does your mother generally let you do the things you like to do? (Most of the time — 7th, 61.2; 11th, 78.8. Sometimes, not very often or never — 7th, 38.8; 11th, 21.2.)

5. How often does your father generally let you do the things you like to do? (Most of the time — 7th, 56.1; 11th, 66.9. Sometimes, not very often or never — 7th, 43.9; 11th, 33.1.)

6. Does your father nag and scold you? (Very much or some — 7th, 31.7; 11th, 33.1. Not much or not at all — 7th, 68.3; 11th, 66.9.)

7. Are you told to keep still when you try to argue with your mother? (Always, most times or as often as not — 7th, 70.6; 11th, 48.5. Seldom or never — 7th, 29.4; 11th, 51.5.)

8. Are you told to keep still when you try to argue with your father? (Always, most times or as often as not — 7th, 71.5; 11th, 50.1. Seldom or never — 7th, 28.5; 11th, 49.9.)

For two of the remaining four items, nonsignificant differences were observed for the seventh-grade sample, but significant differences were observed for the eleventh-grade sample. These items were:

9. Does your mother nag and scold you? (Very much and some — 7th, 35.2. Not much or not at all — 7th, 64.8.)

10. Is your mother too busy to pay attention to you? (Most of the time or some of the time — 7th, 18.8. Seldom or never — 7th, 81.2.)

For one item, a significant difference was found for the seventh-grade sample and a nonsignificant difference was found for the eleventh-grade sample. This item was:

11. Is your father too busy to pay attention to you? (Most of the time or some of the time — 11th, 29.7. Seldom or never — 11th, 70.3.)

Finally, significant differences were found for both grade-level samples for the remaining item:

12. How often does your father understand what you like to do? (Most of the time **versus** some of the time, not very often or never.)

The two total significant chi-squares for the seventh-grade samples and the three total significant

chi-squares for the eleventh-grade samples were analysed further by the partition method described earlier.

The partition analyses for the total chi-squares are reported in table 12. One of the five residual chi-squares was significant. This occurred in relation to the frequency with which eleventh-graders reported that their mothers nagged and scolded them. For this item, as for three of the four other items, however, the chi-square associated with the migration type was not significant. The only significant chi-square associated with the migration type was observed for the responses of the eleventh-grade students to the item pertaining to the degree that their fathers tried to understand what the students wanted to do. Family status was not significantly related to the eleventh-graders' responses to this item. Therefore, the two status levels were combined, and percentages for the responses by the three migration categories were determined. The percentage for the most favorable response, most of the time, was highest for the urban-migrant eleventh-graders, 56.3 percent; next for the urban-nonmigrant eleventh-graders, 52.5 percent; and was lowest for the farm-to-urban migrant eleventh-graders, 42.0 percent.

For three of the remaining items, the significance of the total chi-square apparently was due solely to the differences associated with the status variable and was not associated with the family-migration classification. For the remaining item, the frequency with which eleventh-graders reported that their mothers nagged or scolded them, the residual chi-square as well as the chi-square for the status effect were significant. The interaction effect for this item was ignored, and responses were combined, as shown in table 13, for the two status levels for all four items having significant status differences.

For all four comparisons, larger percentages of favorable responses were reported by the children from the high status families as compared with the children from the low status families.

The foregoing analyses provided practically no support for the hypothesis that the reports of parent-adolescent relationships differed significantly among children in the three family-migration types. Only one set of 12 results for the eleventh-grade sample produced a significant difference associated with the family-migration types. None of the 12 sets of results for the seventh-grade sample showed signifi-

Table 12. Results of the partition of the total chi-squares by family-migration types and family-status levels for the parent-adolescent items.

| Source of variation | Degrees of freedom | Seventh-grade sample | | Eleventh-grade sample | | |
|---------------------|--------------------|---|--|--|----------------------------|---|
| | | Father too busy to pay attention to you | Father understands what you want to do | Father understands what you want to do | Mother nags and scolds you | Mother too busy to pay attention to you |
| | | X ² | X ² | X ² | X ² | X ² |
| Total | 5 | 15.73** | 20.44** | 13.37* | 19.49** | 12.92* |
| Migration types | 2 | 2.81 | 0.98 | 6.55* | 1.42 | 1.08 |
| Status levels | 1 | 9.38** | 13.57** | 2.86 | 5.85 | 8.21** |
| Residual | 2 | 3.54 | 5.89 | 3.96 | 12.22** | 3.53 |

* Significant at the 5-percent level.

** Significant at the 1-percent level.

Table 13. Parent-adolescent item responses for which significant family-status differences were observed.

| Grade-level sample and item | Total | | High status | | Low status | |
|---|----------------|---------|-------------|---------|------------|---------|
| | N ^a | Percent | N | Percent | N | Percent |
| Seventh-grade sample | | | | | | |
| Father seldom or never too busy to pay attention to you ----- | 466 | 72.9 | 269 | 77.3 | 197 | 67.7 |
| Most of the time father understands what you want to do ----- | 406 | 63.4 | 244 | 70.1 | 162 | 55.5 |
| Eleventh-grade sample | | | | | | |
| Mother nags and scolds not much or not at all | 305 | 61.2 | 179 | 63.7 | 126 | 58.1 |
| Mother seldom or never too busy to pay attention to you ----- | 404 | 81.0 | 239 | 85.1 | 165 | 75.7 |

^a The numbers listed are those represented by the percentages. For convenience, percentages are listed for only the one part of the dichotomy reported for each item.

cant variation by the family-migration types. The first hypothesis was not supported. Instead, it appeared that null differences prevailed among the responses of the three groups of children to the parent-adolescent items.

Parent-School Relations

The second general hypothesis was that the interest and participation of the parents in the children's school work and activities would differ significantly among the three migration categories. Data from four items asked of the children were used to measure the interest and participation of the parents in the children's school work and activities. These data were analyzed in the same manner as described for the parent-adolescent relationship items. Total chi-squares with 5 degrees of freedom were calculated first on the basis of the 12 subsamples derived from the migration trichotomy, the status dichotomy and the dichotomy used for each set of item responses.

The total chi-squares were significant for the two father-related items in both the seventh- and eleventh-grade samples:

1. How often does your father take an interest in the school work you bring home? (Often **versus** sometimes or never.)

2. Does your father attend the school programs and other school activities in which you take part? (Never, seldom or sometimes **versus** usually or almost always.)

The total chi-squares were significant for two similar mother-related items for the seventh-grade sample, but were not significant for the eleventh-grade sample. Approximately 49 percent of the

eleventh-graders reported that their mothers often took an interest in their school work. Approximately the same percentage of these students said that their mothers usually or almost always attended school programs or other school activities in which the students participated.

The chi-square partition results for the six tests for which the total chi-squares were significant are reported in table 14.

The residual chi-square for the reports of the seventh-grade students regarding their mothers' participation in school activities was significant. The chi-square associated with the family-migration classification was not significant for this analysis, although the difference associated with status was significant. None of the other five residual chi-squares listed in table 14 was significant. Two of the chi-squares associated with the family-migration classification were significant. These occurred in relation to the seventh-graders' reports of their mothers' interest in their school work and for the eleventh-graders' reports of their fathers' interest in their school work. For both of these analyses, chi-squares associated with family status also were significant. Responses for the "often" category for these two items were used to identify the direction of difference among the three migration types.

Approximately 70 percent of the seventh-grade children from high status families in each of the two urban migration categories reported that their mothers often took an interest in their school work. This was reported by approximately 61 percent of the seventh-graders in the farm-to-urban migration category. At the low status level, the percentages for the "often" response were 70 for the urban-nonmigrant children, 55 for the farm-to-urban children and 49 for the urban-migrant children. When status was ignored and all data were combined into the three migration types, the percentages for the "often" response for mothers' interest in the seventh-grade children's school work were 70 percent for the urban-nonmigrant children, 64 percent for the urban-migrant children and 57 percent for the farm-to-urban children.

The percentages for the eleventh-graders' reports for their fathers' interest in their school work followed the pattern just described. At the high status level, 39 percent of the urban-migrant children reported that their fathers often were interested in their school work, 36 percent of the urban-nonmi-

Table 14. Results of the partition of the total chi-squares for parental interest and participation in school work or activities by family-migration types and family-status levels.

| | Degrees of freedom | Seventh-grade sample | | | | Eleventh-grade sample | |
|---------------------|--------------------|---|---|---|---|---|---|
| | | Father's interest in school X ² | Father's school participation X ² | Mother's interest in school X ² | Mother's school participation X ² | Father's interest in school X ² | Father's school participation X ² |
| Total ----- | 5 | 15.19** | 35.89** | 15.80** | 36.09** | 31.47** | 26.24** |
| Migration types -- | 2 | 2.14 | 1.62 | 6.31* | 3.21 | 9.54** | 3.58 |
| Status levels ----- | 1 | 11.46** | 30.98** | 4.77* | 24.42** | 21.48** | 18.70** |
| Residual ----- | 2 | 1.59 | 3.29 | 4.72 | 8.46* | 0.45 | 3.96 |

* Significant at the 5-percent level.

** Significant at the 1-percent level.

Table 15. Responses for parents' interest and participation in the children's school work and activities for which significant family differences were observed.

| Grade-level sample and item | Total | | High status | | Low status | |
|---|----------------|---------|-------------|---------|------------|---------|
| | N ^a | Percent | N | Percent | N | Percent |
| Seventh-grade sample | | | | | | |
| Father often takes an interest in school work ----- | 333 | 49.4 | 202 | 55.6 | 131 | 42.1 |
| Father usually or almost always attends school programs ----- | 239 | 35.4 | 163 | 44.8 | 76 | 24.5 |
| Mother often takes an interest in school work ----- | 447 | 65.8 | 252 | 69.0 | 195 | 62.1 |
| Mother usually or almost always attends school programs ----- | 392 | 58.0 | 241 | 66.0 | 151 | 48.6 |
| Eleventh-grade sample | | | | | | |
| Father often takes an interest in school work ----- | 137 | 27.4 | 103 | 36.5 | 34 | 15.7 |
| Father usually or almost always attends school programs ----- | 187 | 37.7 | 131 | 47.0 | 56 | 25.8 |

^a For an explanation of the numbers reported in this table, see table 13.

grant children reported such, as did 23 percent of the farm-to-urban migrant children. At the low status level, the responses were 20, 17 and 10 percent, respectively. For the total samples, the percentages were 35 percent for the urban-migrant children, 27 percent for the urban-nonmigrant children and 14 percent for the farm-to-urban children.

Only two of the eight tests of the parents' interest or participation in the children's school work and activities supported the hypothesis that the farm-to-urban parents would be less actively involved than the other parents. These data offered only slight support for the hypothesis. The support must be confined to the two grade-level and sex-classification reports for parents' interest in the students' school work.

Family status was significantly associated with the response patterns for all six analyses reported in table 14. High status and greater interest or participation in the adolescents' school work and activities or, conversely, low status and less interest or participation in the adolescents' school work and activities were related. These relationships are observable from the results given in table 15. The interaction between migration type and family status observed for the seventh-graders' reports of their mothers' participation in the children's school activities was

ignored in developing the percentages for the high and low status for this item.

Personality Characteristics

Measurement of the personality characteristics of the children was based on four factor-analysis scores. These factor scores were developed from the inter-correlation among 44 personality inventory items similar to those included in the Minnesota Test of Personality (10).

Each item was followed by three responses: "Yes," "No" and "Do not know," which were scored as two for "Yes," one for "Do not know" and zero for "No." In addition to the general factor, the following four factors emerged from the analysis:^a

1. The psychosomatic factor which included 13 items related to eye, head, respiratory and other physical strains.

2. The illness-proneness factor which included eight items related to illness, absence from school and relationships with physicians.

3. The obsessive-reaction factor which included seven items related to insomnia, excitability, depression, worry and lonesomeness.

4. The nervous-symptoms factor which included five items related to fears, fatigue and worry.

Personality and mental health characteristics generally are correlated slightly or moderately with family-status levels. It was necessary, therefore, to determine what relationships existed between the four factor scores and the children's family-status levels before tests were made among the personality-factor scores of the children in the three family-migration types. The correlations between the four factor scores and the family-status levels for each of the four grade-level and sex subsamples are reported in table 16. The Hollingshead status scores were used to measure family-status levels (14).

Most of the correlations listed in table 16 are non-significant. The significant correlations ranged between 0.37 and -0.41. No pattern was apparent among the significant correlations with respect to

^a Details of the factor analysis and the items included in each factor are provided elsewhere. See Carpenter (9).

Table 16. Mean scores for family status and the personality-factor scores and the correlation coefficients between family-status levels and the personality factor scores by the sex, grade-levels and family-migration types of the adolescents.

| Variables | Seventh-grade boys | | | Eleventh-grade boys | | | Seventh-grade girls | | | Eleventh-grade girls | | |
|---|--|------------|-------------|---------------------|-------------|-------------|---------------------|------------|-------------|----------------------|------------|-------------|
| | UNM ^a (188) ^b | UM (98) | FUM (57) | UNM (116) | UM (102) | FUM (47) | UNM (170) | UM (92) | FUM (60) | UNM (101) | UM (89) | FUM (43) |
| Family status ^c ----- | 43.9 | 39.2 | 49.4 | 45.4 | 35.9 | 53.0 | 45.2 | 36.1 | 55.7 | 45.3 | 36.3 | 53.7 |
| Psychosomatic factor ---- | 8.7 | 9.3 | 9.2 | 9.1 | 8.8 | 9.0 | 9.8 | 9.4 | 11.4 | 9.7 | 8.9 | 9.8 |
| Illness-proneness factor -- | 8.9 | 9.1 | 9.2 | 8.9 | 8.8 | 8.7 | 8.6 | 8.4 | 9.3 | 8.4 | 8.3 | 7.8 |
| Obsessive-reaction factor - | 3.6 | 3.5 | 4.5 | 5.0 | 4.6 | 5.2 | 4.6 | 4.3 | 6.3 | 5.8 | 5.3 | 6.4 |
| Nervous symptoms factor | 5.8 | 5.5 | 5.9 | 6.5 | 6.6 | 6.7 | 5.3 | 5.0 | 4.7 | 6.1 | 6.2 | 5.9 |
| Correlation coefficients between family-status scores and each of the factor scores | | | | | | | | | | | | |
| Psychosomatic factor ---- | 0.06 | 0.01 | -0.08 | 0.04 | 0.22* | 0.11 | 0.26** | 0.16 | -0.30* | 0.37** | 0.28** | -0.03 |
| Illness-proneness factor -- | -0.09 | -0.08 | -0.22 | 0.02 | 0.10 | 0.04 | 0.01 | 0.07 | -0.33* | 0.34** | 0.02 | 0.04 |
| Obsessive-reaction factor - | 0.12 | -0.08 | 0.20 | 0.05 | 0.14 | 0.05 | 0.12 | 0.10 | 0.16 | 0.28** | 0.22* | -0.20 |
| Nervous symptoms factor | -0.02 | -0.05 | -0.09 | -0.06 | 0.07 | -0.29 | -0.18* | -0.41** | -0.10 | -0.06 | -0.08 | 0.05 |

^a UNM refers to urban-nonmigrant families, UM to urban-migrant families and FUM to farm-to-urban migrant families.

^b Number.

^c Family-status scores are based on the Hollingshead education and occupation index (14). In the Hollingshead system, lower scores represent higher status levels.

* Correlation coefficients significant at the 5-percent level with a two-tailed test.

** Correlation coefficients significant at the 1-percent level with a two-tailed test.

Table 17. Analysis of variance results for personality-factor score variations by the sex, grade level and family-migration types of the adolescents.

| Source of variance | Degrees of freedom | Personality factors | | | | | | | |
|---|--------------------|---------------------|----------|-------------------|----------|--------------------|----------|------------------|----------|
| | | Psychosomatic | | Illness-proneness | | Obsessive-reaction | | Nervous symptoms | |
| | | Mean squares | F ratios | Mean squares | F ratios | Mean squares | F ratios | Mean squares | F ratios |
| Family-migration type | 2 | 0.5925 | 4.71 | 0.0100 | 0.11 | 1.4725 | 84.14* | 0.0175 | 2.23 |
| Grade level | 1 | 0.5208 | 4.14 | 0.5633 | 6.04 | 2.5208 | 144.05** | 2.8033 | 373.78** |
| Sex | 1 | 2.0008 | 15.90 | 0.6535 | 7.00 | 3.3075 | 189.00** | 1.2033 | 160.44** |
| Family-migration type by grade level | 2 | 0.2808 | 2.23 | 0.2433 | 2.61 | 0.2158 | 12.23 | 0.0408 | 5.44 |
| Family-migration type by sex | 2 | 0.4908 | 3.90 | 0.0133 | 0.14 | 0.1575 | 9.00 | 0.1008 | 13.44 |
| Grade level by sex | 1 | 0.3008 | 2.39 | 0.0833 | 0.89 | 0.0675 | 3.86 | 0.3000 | 4.00 |
| Family-migration type by grade level by sex | 2 | 0.1258 | | 0.0933 | | 0.0175 | | 0.0075 | |

the factor scores, migration types, the sex or the grade levels of the adolescents. The correlation data suggested that family status was not consistently or strongly related to the factor scores. Therefore, family status was ignored in the analyses of the differences among the children in the three family-migration types.

The mean scores listed in table 16 were analyzed by a 3-way analysis of variance test. The results of these tests are reported in table 17.

Differences among the mean scores for the psychosomatic or illness-proneness factors were not significantly associated with any of the variables, family-migration type, grade level or sex or with the interaction of any of these variables. Three significant ratios were observed for the analysis of variance results based on the obsessive-reaction scores. These occurred in relation to the three independent sources of variances: family-migration type, grade level and sex. Mean differences associated with grade level and sex were significant for the analyses of the mean scores for the nervous-symptoms factor. Mean scores for the significant differences are reported in table 18.

In all cases, higher scores represent higher values for the factor measured. For the obsessive-reaction factor, the mean for the farm-to-urban adolescents was the highest, the mean for the urban-nonmigrant adolescents was intermediate, and the mean for the urban-migrant adolescents was the lowest. The highest scores among the farm-to-urban adolescents in comparison with the other adolescents on this variable were consistent with the expected direction of results. Also, on the obsessive-reaction factor, the mean for the eleventh-grade adolescents exceeded that for the seventh-grade adolescents, and the mean for the girls was higher than the mean for the boys.

Table 18. Mean differences for which significant F ratios were found in the three-way analysis of variance tests.

| Sources of variation | Personality-factor scores | |
|----------------------|---------------------------|------------------|
| | Obsessive reaction | Nervous symptoms |
| Residence types | | |
| Urban-nonmigrant | 4.6 | |
| Urban-migrant | 4.4 | |
| Farm-to-urban | 5.6 | |
| Grade level | | |
| Seventh | 4.3 | 5.4 |
| Eleventh | 5.3 | 6.3 |
| Sex | | |
| Boys | 4.2 | 6.1 |
| Girls | 5.2 | 5.5 |
| Total | 4.7 | 5.8 |

The grade-level difference for the nervous-symptoms means was similar to the grade-level difference for the obsessive-reaction factor: The mean for the eleventh-graders was higher. The sex difference for the nervous-symptoms factor was the reverse of that for the obsessive-reaction factor. The nervous-symptoms mean for boys exceeded that for girls.

In general, the analyses of the four personality-factor scores failed to support the hypothesis that the mean differences were associated with the family-migration classification. The three groups of children did not appear to differ in those personality characteristics measured by the items included in the psychosomatic, illness-proneness or nervous-symptoms scores. The null hypothesis could be rejected only for the obsessive-reaction scores for differences related to family-migration types.

The substantive importance of the one set of significant differences for the personality scores is assessed in the discussion section which follows.

School-Related and Community-Organization Variables

Two types of data were available for testing differences among the social and school-related characteristics of the children in the three family-migration types. These were responses to three items and a series of mean scores. The item responses were tested by the total chi-square method described earlier. Analysis of variance tests were used to test the significance of the differences among the mean scores.

It was expected that the adolescents' responses to the school relationship items would differ significantly. The farm-to-urban children were expected to reflect less satisfaction with their relationships at school. It was assumed that the farm-to-urban children would have had to make greater accommodations than the urban-migrant children to adjust to the role expectations, other normative standards and the social systems in the Cedar Rapids schools and community. Possible discrepancies between previous role expectations and role expectations in the new community probably would have been greater for the farm-to-urban children. In turn, these discrepancies were expected to be related to greater feelings of dissatisfaction or relative deprivation among the farm-to-urban children.

The responses to each of the three items were dichotomized as shown in the parentheses after each item which follows. For each item, total chi-squares were calculated first for each grade-level sample. The total chi-squares were based on the migration trichotomy, the family-status and the response dichotomies.

The total chi-squares were nonsignificant among both the seventh- and eleventh-grade samples for all three items. These items were:

1. How often do you feel your teachers give more attention to other students than you? (Much of the time or some of the time — 7th, 42.0; 11th, 34.7. Hardly ever or not at all — 7th, 58.0; 11th, 65.3.)

2. How often do you feel your teachers are harder on you than on other students? (Much of the time or some of the time — 7th, 22.7; 11th, 17.8. Hardly ever or not at all — 7th, 77.3; 11th, 82.2.)

3. How many of your schoolmates do you like? (None, a few or some of them — 7th, 6.8; 11th, 6.4. Most of them or practically all of them — 7th, 93.2; 11th, 93.6.)

The uniformly nonsignificant total chi-squares provided no support for the hypothesis being tested. Responses were not related to the family-migration classifications, the family-status classifications or the interaction of these variables.

The continuous data related to the children's school relationships included intelligence scores, grade-point means for the previous school year, number of days absent during the 1959 school year and school-activity participation scores. Community-activity participation scores also were obtained.

The intelligence scores, school grades and numbers of days absent were taken from school records. The scores for the short form of the Otis Quick Scoring Mental Abilities Test (22) were used as the measures of intelligence. Mean school grades were calculated on a 0 to 4.0 continuum. The school-activities scores were developed from a 10-item scale. Weights were assigned for membership and degrees of participation in activities available at the various schools. The community-activity scores were obtained from a 5-item index. Again, weights were assigned for membership and degrees of participation in five community organizations available to adolescents in Cedar Rapids.

The general hypothesis was that mean scores for each variable would differ significantly among the children in the three family-migration types. In comparison with the other children, the farm-to-urban children were expected to have lower intelligence scores, lower grades, a greater number of days absent and lower school-activity or community-activity participation scores.

The expectation of lower intelligence scores among the farm-to-urban children does not mean that these children are potentially less intelligent than the other children. In this investigation, the

intelligence scores were taken as measure of general cognitive responses to the external world. These responses are a function of innate intellectual endowment but are influenced by the quality, variety and intensity of interpersonal relations. The urban children were expected to have had more frequent or intensive interpersonal stimulation which may be associated with academic interests. These experiences, in turn, were expected to be reflected in higher intelligence scores among the urban-reared adolescents. This interpretation of intelligence scores is consistent with the level of measurement attained by the Otis test.

The expectation of lower grades among the farm-to-urban children was partly related to the expected lower intelligence scores among these children. Lower grades among the farm-to-urban youth were also expected because of the lower educational levels which have traditionally prevailed among rural persons in comparison with urban persons. These lower educational levels in rural areas may be related to the lower value given education and academic success by rural than by urban parents (6,7). On these bases, the former farm parents in this sample were expected to have provided less encouragement for their children to make better grades in school. The farm-to-urban adolescents, therefore, were expected to have achieved lower grades than the other children.

The hypothesis that absenteeism would vary among the three groups of children was based on several interrelated generalizations. First, school drop-out rates have been higher among rural than urban youth (7). Second, high absenteeism, especially among high school youth, is probably related to the process of dropping out of school. In this study, absenteeism is used as a negative index of interest in school or the value placed on education. The foregoing two generalizations suggest that absenteeism should be greater among the farm-to-urban youth than among the other youth. Other data which support this inference include the lower value that rural persons have traditionally placed on formal education, the lower status level of the farm-to-urban migrant families and, to some extent, the necessity for the former farm youth to adjust their role expectations, which were appropriate for smaller communities and schools, to those appropriate for the Cedar Rapids community and schools. This adjustment imposes greater demands on these youth, some of whom may choose to solve the problem by withdrawing from school.

Other data permit refinement of the previous hypothesis. School drop-out rates are higher among boys than girls. Therefore, the school absenteeism among boys should exceed that of girls. If the farm-to-urban youth were expected to have higher school absenteeism rates than other youth, these rates should be highest among the farm-to-urban boys.

The high school sample should provide more critical tests of the absenteeism hypotheses than the junior high school sample.

Finally, the farm-to-urban youth were expected to participate less actively in school and community organizations. This hypothesis was based on the possible adjustment problems faced by youth who may have moved from smaller towns to Cedar Rapids. These youth probably left schools where relationships were more informal and had to cope with social organizations in the Cedar Rapids schools and community where relationships were more formal and probably more competitive. One method of adjustment for the farm-to-urban children would be to be less active in these organizations and, hence, not have to face problems of role redefinition and probable greater interpersonal competition. Also, the lower family status of the farm-to-urban adolescents should be related to less active organization participation by these youth in relation to other youth.

Mean scores for each variable are given in table 19 for the samples of boys and girls in both grade levels and by the three family-migration types. Analysis of variance tests were conducted for each of the three means based on the family-migration types within each of the four grade-level and sex samples. None of the F tests was significant among the seventh-grade boys; four were significant among eleventh-grade boys; three were significant among the seventh-grade girls; and one was significant among the eleventh-grade girls. The significant mean differences also can be examined in terms of the variables. Two of the significant differences were observed for the intelligence means, three for the mean grade scores, one for absenteeism and two for the community-activity participation scores. None of the differences among the school-activity participation scores was significant.

In all comparisons of the intelligence scores, including the two significant sets of differences, the means for the farm-to-urban adolescents were lowest, the means for the urban-nonmigrant adolescents were intermediate, and the means for the urban-migrant adolescents were highest. The same rank-order for the mean grades was found only for the seventh-grade girls. Among the eleventh-grade girls, the mean for the urban-nonmigrants exceeded that for the urban-migrants and both exceeded the mean grades for the farm-to-urban girls. For the two samples of boys, identical school-grade means were observed for the farm-to-urban boys and the urban-nonmigrant boys, and these means were lower than the means observed for the urban-migrant boys. In three of the four comparisons, including the one significant set of differences, the highest mean numbers of days absent were found for the farm-to-urban children. The comparison for which this did not occur involved the eleventh-grade girls.

Table 19. Means on school-relationship variables by the sex and grade levels of the adolescents and by their family-migration types.

| School-relationship variables | Boys | | | | | | Girls | | | | | |
|-------------------------------|------------------|---------------|---------------|------------------|---------------|---------------|------------------|---------------|---------------|------------------|---------------|---------------|
| | Seventh-grade | | | Eleventh-grade | | | Seventh-grade | | | Eleventh-grade | | |
| | Urban-nonmigrant | Urban-migrant | Farm-to-urban | Urban-nonmigrant | Urban-migrant | Farm-to-urban | Urban-nonmigrant | Urban-migrant | Farm-to-urban | Urban-nonmigrant | Urban-migrant | Farm-to-urban |
| Number | 190 | 98 | 56 | 115 | 101 | 46 | 171 | 95 | 60 | 100 | 88 | 42 |
| Intelligence | 106.9 | 107.8 | 104.6 | 108.1 | 112.1 | 107.5* | 107.4 | 119.9 | 106.4* | 111.2 | 111.9 | 108.8 |
| Grades | 2.3 | 2.4 | 2.3 | 2.6 | 2.3 | 2.0* | 2.6 | 2.7 | 2.1* | 2.6 | 2.5 | 2.8* |
| Absenteeism | 7.2 | 6.6 | 8.6 | 5.9 | 5.3 | 9.3** | 6.8 | 7.9 | 3.2 | 7.2 | 8.0 | 7.8 |
| School activities | 7.4 | 6.8 | 6.3 | 4.0 | 5.0 | 3.6 | 5.8 | 5.7 | 4.7 | 4.9 | 5.6 | 3.8 |
| Community activities | 3.6 | 3.2 | 3.0 | 2.2 | 3.0 | 2.6* | 3.7 | 4.1 | 2.9* | 3.7 | 3.4 | 2.6 |

* Analysis of variance differences among the three means by family-migration types which were significant at the 5-percent level.

** This difference was significant at the 1-percent level for the F test and remained significant at the 5-percent level after the completion of the analysis of covariance test based on the Hollingshead family-status scores (14).

The school activity means for the farm-to-urban adolescents were lowest in all four sets of comparisons, but none of the differences was significant. And, in three of the four comparisons, including one of the two significant sets of differences, the farm-to-urban adolescents had the lowest community-activity scores. For the other significant difference involving the community-activity scores, the urban-migrant adolescents had the highest mean; the mean for the farm-to-urban adolescents was intermediate, and the urban-nonmigrant adolescents had the lowest mean.

The general pattern of differences among the mean scores and the eight significant sets of differences offered some support for the hypothesis that the children in the three family-migration types differed in selected school-relationship variables. In general, these data supported the view that the farm-to-urban children did less well than the other children in the areas measured by these indexes. However, family status generally is moderately related to school-related variables (5,25). Furthermore, large status differences existed among the families in the three migration types: The farm-to-urban families generally had the lowest status levels; the urban-nonmigrant families were intermediate; and the urban-migrant families had the highest status levels. These family-status differences might account for some of the differences in the adolescents' school-related variables apart from possible previous differences in the socialization experiences of the urban and previously rural children.

Analyses of covariance were used in an attempt to control family-status differences. Family social-status scores were based on the Hollingshead system of status determination (14).

All but one of the significant F tests were non-significant in the covariance test. Only the difference among the mean days absent for eleventh-grade boys remained significant after the covariance tests. As shown in table 19, the mean number of days absent among eleventh-grade boys from the two urban family types was similar, 5.9 days. The mean for the farm-to-urban boys was considerably higher, 9.3 days.

The covariance results removed practically all support for the hypothesis that the school-related scores of the three groups of adolescents differed significantly. Rather, it appeared that family-status differences among the three family-migration types accounted for the significant differences in the school-related variables. Therefore, the last hypothesis of this investigation must be rejected for the school-related mean scores as well.

The children from the three family-migration types did not appear to differ in either their item responses for their relations with their teachers or classmates or, with exception for absenteeism among

the older boys, in those areas of behavior measured by the five sets of mean scores.

Post factum interpretations are always hazardous. However, some risk may be undertaken in attempting to explain the significant covariance results for the absenteeism among the eleventh-grade boys. Some reasons were advanced earlier for expecting greater absenteeism among the older farm-to-urban boys.

Greater absenteeism might be expected among the older boys than among the younger boys for several reasons. The older boys are probably in a stronger position to make their preferences and behavior toward school coincide than are the younger boys. The younger boys and girls, for that matter, would probably attend school whether they wanted to or not. This would be less true for the older youth. If they do not like school, dropping out of school can become a reality for the older youth. Their absenteeism may be an indication of their decision to drop out of school. More boys than girls fail to complete high school. Hence, to the extent that absenteeism may be related to later withdrawal from school, absenteeism should be expected to be greater among the groups whose drop-out rates are highest. These groups generally would include students from lower status families and, because of the higher rural drop-out rates, also should include boys from the farm-to-urban families. For the present sample, this is two ways of saying the same thing, since the farm-to-urban families also were overrepresented among the lower status families.

The interpretation of the greater absenteeism among the eleventh-grade farm-to-urban boys as compared with the other youth is consistent with other known data. Obviously further research is needed to determine the validity or limits of this post factum interpretation.

Discussion of the Adolescent Results

Differences among the children in the three family-migration types were tested for four sets of data: (1) parent-adolescent relationship; (2) parental interest in the children's school work and attendance at their school activities; (3) adolescent personality characteristics; and (4) the social and school-related adjustment characteristics of the adolescents. A general hypothesis was formulated for each set of data. The hypothesis was that the item responses or mean scores differed significantly among the adolescents in the three family-migration types. Arguments were advanced for expecting differences between the responses of the farm-to-urban adolescents and the adolescents in the two other migration categories. Tests based on varying numbers of item responses or sets of mean scores were used to test hypotheses derived from the four general hypotheses just listed.

The data overwhelmingly were contrary to all

four general hypotheses. Practically all differences associated with the family-migration types were nonsignificant in each of the four sets of analyses.

Only 1 of the 24 item differences among responses to the parent-adolescent relationship items produced a significant difference associated with the family-migration types. Chi-squares for two of the eight tests for parental interest in their children's school work or parental attendance at school programs were significantly associated with the family-migration types. These two significant differences were not taken as providing sufficient support for the hypothesis related to the family-migration differences for parental interest or involvement in school work and activities.

Only one of the four sets of differences among the personality scores of the three groups of adolescents was significantly related to the migration classification.

Differences associated with the family-migration classification also were nonsignificant for the six tests of the items related to student-teacher or peer relations. And finally, the school- and community-related mean scores which were significantly different among the three family-migration types were, with one exception, apparently due to the family-status differentials among the three family-migration types. Only one set of differences, for absenteeism among eleventh-grade boys, remained significantly different among the migration types when family status was controlled in the covariance test.

The general conclusion from the comparisons among the children in the three family-migration types is that no apparent or major differences existed among the children in the four areas tested in this study. If the previous rural socialization experiences were different for the farm-to-urban children in comparison with the socialization experiences of the children in the two urban family-migration types, generally these differences were not observed among the three groups of children at the time of the investigation.

The one exception to this conclusion involves the absenteeism rates among the eleventh-grade boys.

The higher absenteeism among the older farm-to-urban boys was congruent with other data on differences in drop-out rates between rural and urban youth and between boys and girls. However, the failure to find differences in school grades or in other school-related variables limits the importance which may be attached to the greater absenteeism among the older former farm boys. The finding, however, suggests further research on the adjustment of farm boys in urban areas.

A major methodological weakness of this study limits the interpretation which may be placed on the null differences that were observed among the characteristics of the adolescents in the three family-migration types. Data were not available to specify the nature or magnitude of differences in the previous socialization experiences of the three groups of adolescents. On the one hand, the null differences may be related to relatively minor differences in the previous socialization experiences of the adolescents. On the other hand, the null differences may reflect the homogenizing impact of the common urban experiences of the adolescents. It is apparent, however, that given whatever differences existed in prior rural and urban socialization experiences, the adolescents were similar after having shared a common urban environment.

Differences which were observed among the adolescents generally were associated with family-status differentials. This observation is important because of the known status differences among the three family-migration types.

The data in this study suggest that children with farm backgrounds accommodate themselves readily to new conditions that they encounter in urban areas.

At a broader level, the data suggest that family migration is not deleterious to the developmental characteristics of children. Apparently, the children in the farm-to-urban families or those in the urban-migrant families learn to adjust to new social and school environments. And, in terms of the characteristics measured in this study, they become indistinguishable from the children who have lived all their lives in one metropolitan area.

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