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ABSTRACT

Designed to aid rural development planners, researchers, and extension personnel, this annotated bibliography presents items which represent: (1) the results of rural development research performed between 1967 and 1974 in the North Central Region by scientists affiliated with Agricultural Experiment Stations; and (2) additional references to work that is relevant to each of the areas of rural development, even though performed by scientists outside the experiment stations and in some instances outside the 12-state region. Developed from a 1973 review of rural development research, this bibliography includes some 475 citations which are categorized via the following topics: (1) Population; (2) Economic Development Opportunities; (3) Economic Services; (4) Social Services; (5) Environment and Natural Resources; (6) Individual and Family Decision Making; (7) Group and Community Decision Making; and (8) General Rural Development. While all citations are not annotated, most citations are accompanied by an author abstract. (JC)

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An Annotated Bibliography of Rural Development Research in the North Central Region



NORTH CENTRAL REGIONAL CENTER FOR RURAL DEVELOPMENT

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AN ANNOTATED BIBLIOGRAPHY OF
RURAL DEVELOPMENT RESEARCH
IN THE NORTH CENTRAL REGION

Edited by David L. Rogers, Larry Whiting,
and Judy A. Anderson

North Central Regional Center for Rural Development
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April 1975

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INTRODUCTION

In 1973 the North Central Regional Center for Rural Development and the North Central Research Strategy Committee on Rural Economic and Human Resource Development (NCRS-3) were asked by the North Central Research Planning Committee to: (1) establish the current status of rural development research, (2) indicate strengths and weaknesses in the present program, and (3) propose shifts for strengthening existing programming efforts. The report was completed and presented in March, 1974. A copy of this report is being prepared for publication.

This bibliography was developed from this review of research. The review activity included: (1) establishing a definition of rural development, (2) identifying major categories of rural development research, (3) identifying appropriate research projects in the North Central region, (4) collecting information generated from this research, and (5) reviewing existing information and proposing new research priorities to fill gaps in areas of needed research.

The definition of rural development used in the review activity and as a guide in collecting information about research on rural development was as follows: Rural development is improving (1) the level and distribution of opportunities among rural residents, and (2) the processes and procedures for achieving this objective. Opportunities to be improved included: (1) population composition and movement, (2) employment, income, investments, and wealth, (3) economic services and facilities, (4) social services, (5) natural resources, (6) individual and family decision making, (7) group and community decision making, and (8) general rural development theory.

Each of the categories comprised an area in which information on research activities was collected. Research projects in experiment stations in the North Central Region were judged as to whether they qualified as rural development projects according to the above definition or whether they dealt with some other topic. Projects meeting the rural development criteria were divided into the eight categories previ-

ously described and each category of projects was reviewed by a committee of scientists to identify strengths and weaknesses of research in that category.

Each review committee was provided a list of the projects in its category and was asked to solicit research reports and bibliographies from researchers that would be helpful in identifying information about rural development processes and outcomes that had been obtained through previous research. Researchers were contacted to provide information if they: (1) had research projects classified as rural development, and (2) were engaged in research administered through Agricultural Experiment Stations in the 12 states which make up the North Central Region. Information about project results was collected between the fall of 1973 and spring of 1974. Each review committee contacted researchers and requested the following information from their projects: (1) a copy of each publication resulting from their project, (2) an abstract of all material published from their project, and (3) a complete citation of other published items they felt were important in their area of research. Instructions given to researchers who supplied abstracts of their work were as follows: Abstracts were to include study objectives, how research was performed, and major findings and conclusions. Researchers were asked to submit abstracts for all material that would ordinarily appear in a library or that they would be willing to furnish to others upon request. This was to be done for all material published since 1967. The abstracts which appear in this bibliography were prepared and submitted by the authors. In a few instances, minor editorial changes were made during the compilation process.

The items in this bibliography represent: (1) the results of rural development research performed between 1967 and 1974 in the North Central Region by scientists affiliated with Agricultural Experiment Stations, and (2) additional references to work that is relevant to each of the areas of rural development although it may have been performed by scientists outside the experiment stations and in some instances, outside the 12-state region. This bibliography does not contain references to all the research on rural problems done in Agricultural Experiment Stations, nor does it contain references to research performed by scientists outside the North Central Region (except where their work might have been cited as part of the additional references supplied). It does not include research performed within the North Central Region at institutions other than land grant universities.

The main purposes of this bibliography were to assemble the results of applied research performed by scientists in

Agricultural Experiment Stations in the region and to make the results of this research available to a wide audience including researchers, extension personnel, and planners. The references in this report include papers and other unpublished materials that tend to be fugitive and difficult to obtain through conventional channels. This bibliography should help interested parties secure the results of research soon after its publication, thus facilitating a more rapid utilization of research findings in the field of rural development.

We wish to acknowledge the contribution of the following persons who helped in collecting and assembling the material in this bibliography: Sid Staniforth, University of Wisconsin; Bert Ellenbogen, University of Minnesota; Earl Swanson, University of Illinois; Delmar Helgeson, North Dakota State University; Sarah Manning, Purdue University; Fritz Fliegel, University of Illinois; Jan Flora, Kansas State University; and Robert Crown, Iowa State University. Much technical assistance was provided by Judy A. Anderson (editing of the reference citations) and Barbara Marvick (computer text editing).

David L. Rogers
Larry R. Whiting

I. POPULATION

Baker, Thomas
Campbell, Rex
University of Missouri, Columbia, MO. 65201

Race and Residence in Missouri Cities. Prepared cooperatively by Dept. of Rural Sociology, University of Missouri, and Missouri Commission on Human Rights, State of Missouri. 1971.

THE PURPOSE of this booklet is to provide information on residential patterns of Missouri citizens according to race using information from the 1970 U.S. Census of Population. Residential maps were prepared for 10 cities which reflect past and present discriminatory practices in housing; i.e., concentration of minority groups within certain sections of each city, especially in the older, central portions. U.S. census tables of Missouri cities with 2,500 or more population are presented to indicate significant absolute numbers and percentages of nonwhite population throughout the state, with the main emphasis on Negroes. Only 11 of the 25 Missouri cities having official human rights commissions have fair housing ordinances. Particular emphasis is placed on these cities' coverage stipulations and enforcement frameworks.

After preparing data pertinent to fair housing practices in Missouri, authors conclude with a model fair housing act which would, in effect, expand the number of local official agencies and commissions, the fair housing ordinances within existing and newly created commissions, the coverage of fair housing laws, and enforcement facilities and practices.

Barb, Kenney Harold
Kansas State University, Manhattan, KS 66502

Predicting Migration in Kansas: An Evaluation of Alternative Procedures for Selecting Predictors and Models.

Unpublished M.S. thesis. Dept. of Sociology and Anthropology. Kansas State University. 1972.

THE STUDY was carried out to evaluate two methods of selecting indicators to predict migration rates for the 105 Kansas counties. It was determined which of two regression models was better suited to account for variation in migration rates. The feasibility of developing a model(s) to predict migration rates for Kansas with efficiency was investigated.

Data collected from the 1960 U.S. Census of Population for Kansas were employed. Factor analysis and step-wise multiple regression analysis were used to select three best variables from a pool of 24 social, economic, and demographic variables. A "restricted" regression model was employed which considered only the three variables selected. A "full" model was used adding four terms designed to test for "interaction effects" of the three variables.

Results indicated that step-wise regression was better than factor analysis in selecting indicators. The full model was shown to be generally better than the restricted model. Economic indicators proved to be more reliable than social or demographic indicators in predicting migration rates.

Beale, Calvin L.
U.S. Dept. of Agriculture, Washington, DC 20250

Quantitative Dimensions of Decline and Stability Among Rural Communities. 1974. In Communities Left Behind: Alternatives for Development. Ames: Iowa State University Press. Chpt. 1.

THIS CHAPTER examines population change of rural incorporated places and counties for the midwestern region, with particular emphasis on Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

Beamer, Bruce
South Dakota State University, Brookings, SD 57006

A Study of Selected Demographic Factors Associated with Changes in the Aged Population of South Dakota,

1960-1970. Unpublished M.S. thesis. Dept. of Rural Sociology. South Dakota State University. 1972.

THE THESIS examines demographic factors associated with the gain of persons 65 years of age and over in South Dakota. County and size of place is taken into account. From 1960 to 1970 South Dakota experienced a gain of 8,971 persons 65 years of age and over in spite of a loss in total population. South Dakota had the fifth largest proportion (12.1 percent) of aged and the fourth largest increase in proportion (1.6 percentage points) in the nation. South Dakota's aged population varied considerably by county and size of place when examined by number, percent, and proportion. Females comprised 90 percent of the increase in aged; 6,000 were in the age group 75 years and older. Multiple regression analysis revealed that within the set of ten variables investigated, size of the largest incorporated place, advancement of the cohort into the aged category, decrease in rural farm and urban places, and increase in the Indian population were associated with the increase of aged population in the decade.

Butler, Eugene T.

Riley, Marvin P.

South Dakota State University, Brookings, SD 57006

Age and Sex Structure of the Population of South Dakota, 1960 and 1970. South Dakota Agr. Exp. Sta. Bul. No. 599. June 1972.

THE BULLETIN contains age-sex pyramids, data tables, and nine ratios (e.g. dependency ratio) for each unit for 1960 and for 1970. The units included are: United States; North Central Region; West North Central Division; South Dakota, 1890-1970; South Dakota White and Non-White, Urban, Rural, Rural Farm--Nonfarm, and Urban Places by Size; State Planning Regions; Counties and Urban Places. Note: Reference tables have little or no interpretation.

Beegle, J. Allan

Michigan State University, East Lansing, MI 48823.

Michigan's Population Today and in 1985. Preliminary report. Dept. of Economics. Michigan State University.

1972. (Mimeo.)

SEVERAL demographic factors are discussed in relation to the present and future population of Michigan. Tables present population percentage increases over the last decade, metropolitan and nonmetropolitan area population increases, and net migration calculations. Note: Reference tables have little or no interpretation.

Michigan State University, East Lansing, MI 48823

Population Growth and Redistribution. Michigan Agr. Exp. Sta. Development and Public Affairs Rpt. No. 150. Oct. 1971.

THIS PUBLICATION focuses on population growth and distribution in Michigan during the 1960-70 decade. Maps illustrating total population for counties, numerical and percentage change, and gains and losses through net migration are presented.

Results indicated that Michigan's population during the 1960's grew largely from a natural increase of slightly more than one million people, while net in-migration represented only 0.5 percent of the state's population. However, calculations show that net migration played a major role in population redistribution within the state during the decade. The rate of change through net in-migration was greater for nonmetropolitan areas. Many nonmetropolitan counties with long histories of out-migration had in-migration during the last decade, while many metropolitan counties lost population suggesting a trend of suburbanization. The Ann Arbor and Lansing metropolitan areas, on the other hand, experienced gains through in-migration.

Fulton, Phillip
Rieger, Jon
Michigan State University, East Lansing, MI 48823

Profiles of Rural Youth: A Decade of Migration and Social Mobility. Michigan Agr. Exp. Sta. Development and Public Affairs. Jan. 1973.

THE EARLY career experiences of a group of high school students in Michigan's Upper Peninsula are covered in this study. Covering a span of ten years, the study examines various aspects of young, rural peoples' experiences, including migration, educational and occupational achievements, marriage, and family formations. The study attempts to answer questions concerning career planning among young people from rural communities.

Bender, Lloyd
Campbell, Rex R.
Green, Bernal
University of Missouri, Columbia, MO 65201

The Process of Rural Ghettoization: Population and Poverty Growth in Rural Regions. Paper presented at American Association for the Advancement of Science. Dec. 1971.

OZARKS' REGION data is utilized to exemplify "rural poverty ghettoization." A process of rural poverty ghettoization is conceptualized and illustrated with Ozark's region data. The process begins when a region comes under economic stress. Forces are exerted which change a region's comparative advantage to favor labor-intensive, low-wage, industrial expansion, which reinforces the accumulation of a poverty-prone population. Three sub-processes are affected: (1) class selective migration, (2) intergenerational familial poverty, and (3) changes in the productivity of the social and economic institutions. The result is the tendency for poverty to accumulate in a region once the process has been initiated--the rural poverty ghetto is not self-correcting, but grows.

Policy implications for initiating change in the seemingly unbreakable cycle are presented. Emphasis is placed on the necessity of a comprehensive rather than an ad hoc approach, massive outside assistance, multilateral programs, and appreciation of the sheer magnitude of the problem in order to devise effective, lasting socioeconomic change.

Bird, Alan R.
U.S. Dept. of Agriculture, Washington, DC 20250

Migration and Its Effect on Agriculture and Rural Development Potential. Paper presented at a national symposium, The Labor Force: Migration, Earnings, and Growth. Muscle Shoals, AL. June 22-23, 1972.

Bogunjoko, Issac O.
Kansas State University, Manhattan, KS 66502

The Impact of Differentiation and Centrality on the Age-Specific Migration in Kansas Counties, 1960-1970. Unpublished M.S. thesis. Dept. of Anthropology. Kansas State University. 1973.

THIS STUDY utilizes age-specific migration rates for the decade of the sixties as dependent variables and the differentiation (complexity of services) and geographic centrality as independent variables. There is a fairly evident life cycle migration pattern for the state. Persons in transition from high school to college or to the work force (ages 15-24 in 1970) migrate to highly differentiated, moderately central counties, because jobs and colleges are located in the most differentiated places. As people enter the middle productive age groups, there is a tendency to migrate to less differentiated, but still quite central counties, suggesting a separation of residence from work place. With retirement, those who migrate seek quite undifferentiated (although somewhat more central) communities. Finally, the trend of migration to less central and less differentiated counties begins to reverse in the late retirement years, when the few who do migrate seek somewhat larger (correlations with independent variables are near zero) and more central places, probably in search of better medical or nursing care.

Buzenburg, Mildred E.
Kansas State University, Manhattan, KS 66502

The Interrelationships of Region, Population Change, and Change in Number of Retail Firms in Selected Areas on Nonmetropolitan Kansas. Econ. and Soc. Rpt. No. 2. Kansas Agr. Exp. Sta. Kansas State University. 1963.

Campbell, Rex R.
University of Missouri, Columbia, MO 65201

The Heterogeneity of Rural Areas. Paper presented at the National Workshop on Rural Development in Lincoln, NE. Oct. 1971.

HETEROGENEITY between communities is discussed using "types" of villages, such as commercial farming, government, residential, and tourist. The following topics are presented in attempting to outline implications for change in rural area higher education: interdependence between rural areas and metropolitan centers; changes arising from modern farming practices; aspects of rural industrialization; commuting patterns and mobility.

Chang, H.C.
Iowa State University, Ames, IA 50010

Iowa's Population: Past, Present, and Future. Iowa Agr. Exp. Sta. Spec. Rpt. No. 71. Feb. 1973.

THIS STUDY is intended to place Iowa's population in perspective in relation to that of the United States. It describes demographic patterns in Iowa: The structure and composition of the population (age, sex, race, marital status, and education) and its component changes during the period 1960-90 are examined under various assumptions.

Results show that Iowa follows national trends closely in marital status and sex ratio but has a slightly higher median age and a higher index of aging than the United States as a whole. Mortality rates and the number of degenerative and organic diseases for Iowa are higher, a reflection of a progressively aging population. Data on place of residence were examined to determine mobility status. They indicated that Iowans are generally less mobile than the total U.S. population.

Iowa has lost nearly a million people through out-migration. Sixty percent of those people left in the past three decades. Net out-migration in Iowa attained a record high in 1950-1960, but during 1960-1970 rates dropped one-fifth, suggesting that in the future, Iowa will experience progressively less population loss.

Iowa State University, Ames, IA 50010

Natural Population Decrease in Iowa Counties. Unpublished manuscript. Iowa State University. 1973.

THIS PAPER examines differences between Iowa counties with natural decreases in population and those with natural increases in population. It analyzes the part that migration and fertility played in bringing about an excess of deaths over births in Iowa counties. The county groups are distinctly different in demographic and socioeconomic characteristics. Out-migration as a mode of response adopted by the rural population in Iowa is by far the most dominant factor leading to natural decrease. Low fertility is a contributing factor to the imbalance between births and deaths, but the amount of influence of fertility adjustment over the fertility differentials among county groups cannot be ascertained in this study because of the correlation between fertility and Catholic Church membership in counties. Data of this study were obtained from the population censuses and vital statistics.

Iowa State University, Ames, IA 50010

Population Projections by Age and Sex for State and Counties of Iowa, 1960-1990. Iowa Agr. Exp. Sta. and Coop. Ext. Spec. Rpt. April 1973.

THIS REPORT contains population projections by age and sex for the state and for the 99 counties of Iowa for six five-year periods. Of the nine series of projections based on various assumptions on survival, fertility, and migration, only four series are included in this report for brevity. A three-component method is used for the projections. Note: Reference tables have little or no interpretation.

Iowa State University, Ames, IA 50010

Population Projections by Age and Sex for State and Counties of Iowa, 1975-1990. Iowa Agr. and Home Econ. Exp. Sta. Bul. and the Coop. Ext. Serv. June 1973.

THIS REPORT encompasses population projections by age and sex for the state and for the 99 counties in Iowa. Projections were made for seven age groups for six five-year periods. Since 1970 population census data were unavailable at the time, 1960 population data were used to project populations for the future. Assumptions were made to take care of a possible range of variations in future populations. It was assumed that mortality rates in Iowa will follow expected national trends with a small decline in the future. Age-specific fertility rates for Iowa were adjusted to follow the national trend. Migration rates were calculated for each county by age and sex on the basis of three assumptions. Note: Reference tables have little or no interpretation.

Erickson, Donald B.
Flora, Cornelia
Kansas State University, Manhattan, KS 66502

Kansas Population Figures by Counties. Kansas Coop. Ext. Serv. Ser. MF-282. Feb. 1972.

THIS PUBLICATION contains a series of tables which indicate population change and population structure for Kansas counties for 1970 and earlier. It includes data on fertility, natural increase, age structure, household value and size, urbanization, marital status, population, density, migration, and population change. The study indicates that there is a direct relationship between size of place and population growth. The number of counties with net natural decrease has increased in the last decade (from 3 to 32 counties), indicating that age structure of rural areas (strongly influenced by out-migration of young people) is causing population to decline through an excess of deaths over births. This suggests that the counties which have sustained the greatest losses in population through out-migration will continue to lose population, thus accentuating the shift from rural to urban areas for several decades into the future-- unless these rural counties begin to experience net in-migration.

Eteng, William I.
 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Retirement and Migration in the North Central States: A Comparative Analysis: Wisconsin, Florida, Arizona. Pop. Ser. No. 20. Dept. of Rural Sociology. University of Wisconsin. March 1970.

Fauchs, Zavala
 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Fertility Trends in Wisconsin, 1900-1963. Dept. of Rural Sociology. University of Wisconsin. June 1966.

 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

The Socioeconomic Composition of Wisconsin's Population, 1900-1960. Pop. Ser. No. 12. Dept. of Rural Sociology. University of Wisconsin. May 1968.

THE PURPOSE of this study is to describe the socioeconomic composition of Wisconsin's population for the period between 1900 and 1960, with emphasis on the decades 1950 and 1960. Income, education, occupation, and labor force status are employed as dependent variables, while age, sex, color, marital and family status, and residence are independent variables. Dependent variables are analyzed for the state, and standard metropolitan areas and urbanized areas are discussed. Socioeconomic variables for Wisconsin are compared with the North Central Region.

Featherman, David L.
University of Wisconsin, Madison, WI 53706

Residential Background and Socioeconomic Achievement in
Metropolitan Satisfaction Systems. Rural Sociology
36(2): 107-124. June 1971.

Field, Donald
Dimit, Robert
South Dakota State University, Brookings, SD 57006

Population Changes in South Dakota Small Towns and
Cities 1949-1960. South Dakota Agr. Exp. Sta. Bul. No.
571. Rural Sociology Dept. South Dakota State Univer-
sity. March 1970.

THE PURPOSE of the study was to identify factors associated with the growth and decline of small towns and cities in South Dakota. The first section of the study is devoted to universal societal changes affecting small town change from an historical perspective. Societal factors contributing to small town decline are modern transportation facilities, commercialization of agriculture, diminishing local control, and the resultant rural out-migration.

The second section deals with factors associated with population change of towns and cities within South Dakota during the 1940-1960 period. Specific reference is made to size of place, location, previous growth experience, and county seat status. The larger the town, the greater the population growth. The pivotal size category between growth and decline was towns between 500 and 1,000 inhabitants; slightly over half had declining populations during both decades. County seats showed much greater growth than did noncounty seats, although initial population size was not accounted for. The relationship between population change and distance from larger centers was rather ambiguous, although in general there was a positive relationship.

Flora, Cornelia
 Kansas State University, Manhattan, KS 66502

The Impact of Migration on Kansas. Kansas Agr. Exp.
 Sta. Bul. No. 570. June 1973.

DIFFERENTIAL migration rates by age and sex, calculated by the life survival table method for the period 1960-1970, are presented for Kansas counties, and the impact on Kansas population structure is discussed. Trends of population loss and gain are included.

Over half of Kansas counties reached their peak population before 1910 and have since been losing population. Approximately 6.2 percent of the population left the state during the decade of the sixties, while the 3.1 percent increase during the decade resulted from more births than deaths.

 Kansas State University, Manhattan, KS 66502

Reference Tables: Population Change of Counties and Incorporated Places in Kansas, 1950-70. Kansas Agr. Exp. Sta. Rpt. of Prog. No. 177. June 1971.

THIS REPORT contains tables indicating the number of inhabitants and decennial population change for counties and incorporated places in Kansas arranged according to size, magnitude of change in population, and alphabetically.

 Rusholt, Kirsten
 Curtis, William
 Kansas State University, Manhattan, KS 66502

Migration in Kansas: Out-Migration and Population Trends. Kansas Agr. Exp. Sta. Report of Progress. April 1971.

NET OUT-MIGRATION for Kansas is discussed for the state

as a whole and on a county-by-county basis, as well as changes in total population size and differential natural increase. Patterns for a three-decade period are presented and analyzed.

Folse, C.L.
Riffe, W.W.
University of Illinois, Urbana, IL 61801

Changing Patterns of Business Services and Population in Illinois Rural Villages. Illinois Agricultural Economics. Vol. 9. Dept. of Agricultural Economics. Illinois Agr. Exp. Sta. Jan. 1969.

THIS ARTICLE focuses on the interrelationships among population and trade structure characteristics of Illinois villages. Number and types of business services in 633 rural incorporated Illinois villages were tabulated and classified according to the product and service in which the business dealt for 1940 and 1960. The communities were classified as having declining, stable, and growing populations. Business services were classified in three groups--consumer, consumer-producer, and producer. It was found that a number of consumer services showed a significant decline; producer services, a strong increase; and consumer-producer services remained about the same in number in the two-decade period for the entire sample. This general pattern held for all three classes of villages.

Within each population-change category, the smaller villages had relatively more producer services, and the larger ones had relatively more consumer services. The population of consumer-producer oriented services was unrelated to either village size or population change.

Fugitt, Glenn V.
University of Wisconsin, Madison, WI 53706

County Seat States as a Factor in Small Town Growth and Decline. Social Forces 44(2): 245-251. Dec. 1965.

University of Wisconsin, Madison, WI 53706

The Places Left Behind: Population Trends and Policy for Rural America. Rural Sociology 36(4): 449-470. Dec. 1971.

THERE IS a growing interest in population distribution policy, with proposals for a slowdown of growth in and near large cities and a promotion of growth in nonmetropolitan areas. To provide basic information on this issue, the paper analyzes population changes in incorporated places of the nonmetropolitan United States between 1950 and 1970. Size of place distributions have changed little since 1950; however, the percentage of places growing over each decade ranges from under 30 to over 85 for different size and location groupings, with smaller, more remote places less likely to grow. A smaller proportion of places over 2,500 grew in the decade 1960-1970 than in 1950-1960, whereas in the South and in segments of the North Central region, there was an increase in the later decade in the proportion of smaller places growing. There is evidence of an emerging decentralization trend around larger, nonmetropolitan centers. Regions of the country show marked differences in some patterns. The implications of the results for population distribution policy and for problems in formulating and implementing such policy are discussed.

University of Wisconsin, Madison, WI. 53706

Population Redistribution in the West North Central States. Rural Community Development Seminar. Focus on Iowa. Seminar paper, Center for Agr. and Rur. Devel. Iowa State University. Ames. 1972. pp. K1-K20.

THIS PAPER examines population trends in the seven West North Central States (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota) between 1950 and 1970. Trends for states, counties, and incorporated places are analyzed. The West North Central division is growing less rapidly than any other census division. However, Minnesota and Missouri had as few as half their counties decline between 1960 and 1970, while this was true of 44 percent of the counties of the nation.

Metropolitan counties are considerably more likely to grow than nonmetropolitan counties. Among nonmetropolitan

counties there is a reasonably consistent, simultaneous association between growth and (a) distance to nearest SMSA central city (negative relationship), and (b) size of largest incorporated place in the county (positive relationship). The proportion of the population that is metropolitan (using a constant 1963 boundary) increased from 39 to 48 percent during the 20-year period. The remote counties (over 100 miles from an SMSA) are holding their own in terms of relative population and showed greater growth between 1960 and 1970 than in the previous decade.

The growth and decline of cities and towns was examined separately and associated with initial size of place and the location variables. The findings parallel those for counties. The population change in and out of incorporated places was compared for the various location groupings.

University of Wisconsin, Madison, WI 53706

Population Trends of Nonmetropolitan Cities and Villages of the United States. In Sara Mills Mazie, ed., Population, Distribution and Policy. Vol. V of Commission Reports. U.S. Commission on Population Growth and the American Future. U.S. Government Printing Office. Washington, D.C. 1972.

University of Wisconsin, Madison, WI 53706

Some Demographic Aspects of the Small Town in the United States. Sociologica Ruralis 12(2): 147-161.

Green, Bernal L.
Bender, Lloyd D.
Campbell, Rex R.
University of Arkansas, Fayetteville, AR 72701

Migration into Four Communities in the Ozarks Region. Arkansas Agr. Exp. Sta. Bul. No. 756. University of Arkansas. June 1970.

Gutierrez, Elizabeth
Lujan, Herman
University of Kansas, Manhattan, KS 66502

The Kansas Migrant Survey: An Interpretive Profile of the Mexican-American Migrant Family. Institute for Social and Environmental Studies. University of Kansas. May 1973.

Haller, Archibald O.
University of Wisconsin, Madison, WI 53706

Occupational Choices of Wisconsin Farm Boys. Rural Sociology 32(1): 37-55. March 1967.

Honnen, James S.
Eteng, William I.
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Retirement and Migration in the North Central States: Comparative Socioeconomic Analysis: Wisconsin and Florida. Pop. Ser. No. 19. Dept. of Rural Sociology. University of Wisconsin. July 1969.

Johnson, Arthur
Tait, John L.
Iowa State University, Ames, IA 50010

The Council Bluffs Area--Past, Present and Future. Iowa Coop. Ext. Serv. CRD Rpt. 93. Sept. 1973.

THIS PUBLICATION examines the population changes of the 1460-70 decade affecting the Council Bluffs Area, which encompasses eight counties. Analysis focuses on number of inhabitants, number of farms, rural-urban trends, incorporated places, births, deaths, migration, age structure, dependency ratios, income, and employment. The primary aim of the publication is to provide leaders and citizens with information about major population changes affecting the

Council Bluffs area. Emphasis was given to the implications these changes will have for individuals, communities, counties, and the region.

Tait, John L.
Iowa State University, Ames, IA 50010

The Mason City Area: Past, Present, and Future. Iowa
Coop. Ext. Serv. CRD Rpt. 94. Sept. 1973.

THIS PUBLICATION outlines changes occurring in population structure and composition in the Mason City area, consisting of eight counties, in north central Iowa. (Situation and recommendations are similar to those for the Council Bluffs area. See Number 93.)

Tait, John L.
Iowa State University, Ames, IA 50010

Population Trends of Incorporated Places in Iowa,
1900-1970. Iowa Coop. Ext. Serv. Pm. 539. June 1972.

INFORMATION ABOUT the population trends of incorporated places in Iowa is provided in this report. Incorporated places are presented by 16 multi-county regions which have been suggested for planning purposes. Population of incorporated places is presented alphabetically within the region by county for ten-year periods from 1900-1970.

Data for the decade 1960-1970 suggest that population movement within the state is toward medium and large trade centers within the sphere of influence of a metropolitan center--more than toward the metropolitan center of it. Population of unincorporated areas declined less in the same urban areas than it did in the remaining regions of the state. The more rural and westerly (whether rural or not) areas of the state show declining population.

Karp, Herbert
Michigan State University, East Lansing, MI 48823

Migration and Functional Expansion: An Ecological Analysis of Population Redistribution. Land Economics 47(4). 1971.

THIS ARTICLE reports that sustained functional expansion (urbanization) in communities occurs through the disposition of income generated in the community's export sector, or the extent to which income deriving from a community's export base has a local multiplier effect rather than flowing out in the purchase of services. It suggests that further attempts need to be made to indicate those ecological and demographic conditions associated with variability in the extent of a community's export base.

 Kelly, K. Dennis
 Michigan State University, East Lansing, MI 48823

Toward an Ecological Analysis of Intermetropolitan Migration. Markham Publishing Co. Chicago. 1971.

THE STUDY is "designed to investigate the general hypothesis that it is possible to explain much of the variance in migration between large metropolitan areas with variables that are theoretically and operationally independent of migration and without using a size-effect factor to inflate the size of the multiple correlation." Part 1 contains a critique of the migration models of Stouffer and Zipf and describes the development and testing of the author's hypothesis. Part 2 "further develops the 'chain of causality' involved in the relationship between population change attributable to migration and economic opportunity." Using data from the 1960 U.S. census, 116 streams of migrations between SMSAs were studied to test the hypothesis.

Klaff, Vivian Z.
 Fuguitt, Glenn V.
 University of Wisconsin, Madison, WI 53706

Rural and Urban Population Change in Wisconsin, 1960-1970. Pop. Ser. 70, No. 3. Applied Population Laboratory. Dept. of Rural Sociology. University of Wisconsin. Dec. 1972.

THE REPORT documents the population distribution as of 1970, contrasting rural and urban, metropolitan and nonmetropolitan, and geographic sections of the state. Population redistribution patterns for 1960-70 are traced, and significant differences with previous decades are discussed.

Klietsch, R.G.

Iowa State University, Ames, IA 50010

Social Response to Population Change and Migration: The Impact of Population Change on Individuals and Institutions. North Central Reg. Res. Pub. No. 153. Iowa Agr. and Home Econ. Exp. Sta. Iowa State University. Ames. Sept. 1964.

Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Relation of Population to Social Change in the North Central Region, 1960-1973. Wisconsin Project No. 713 (NC-97). Dept of Rural Sociology. University of Wisconsin.

PROJECT 713 deals with the analysis of the population of the State of Wisconsin using counties as the unit of analysis. The general characteristics of the population including agriculture were analyzed. The analysis of the agricultural data deals directly with rural development.

Field studies were also used to analyze population data in relation to other types of data. Rural development loomed large again in the study of Price County, Wisconsin. Kenosha County, Wisconsin, was also studied and compared with Price County. Price County is a low-income county, and Kenosha is a high-income county. The study was made in 1964.

The pattern of analysis included a study of the census from 1940-1970. The emphasis was on population projections and changes in general characteristics of the population.

 Reinhardt, Hazel
 University of Wisconsin, Madison, WI 53706

Dependent Population and Dependency Rates in Wisconsin
 1960-1970. 1970 Pop. Note No. 3. Dept. of Rural Soci-
 ology. University of Wisconsin. June 1973.

 Reinhardt, H. H.
 University of Wisconsin, Madison, WI 53706

Population Change 1950, 1960, 1970. Pop. Ser. 70. No.
 2. Applied Population Laboratory. Dept. of Rural Soci-
 ology. University of Wisconsin. April 1971.

THIS REPORT presents data on aspects of population
 change from 1450 to 1470 in Wisconsin. Natural increase and
 net migration are examined by county and administrative dis-
 tricts. Population distribution by residence, rural-urban
 population, incorporated places, county seats, and standard
 Metropolitan Statistical Areas are discussed.

Ostenson, Thomas K.
 North Dakota State University, Fargo, ND 58102

Reference Tables: Population Change of Counties and In-
corporated Places in North Dakota, 1950-1970. Agr.
 Econ. Stat. Ser. No. 5. North Dakota Agricultural Ex-
 periment Station. Dec. 1971.

THIS BULLETIN contains tables indicating number of in-
 habitants and decennial population change for counties and
 incorporated places in North Dakota arranged in order of
 size, magnitude of change in population, and alphabetically.
 Note: Reference tables have little or no interpreta-
 tion. Reinhardt, Hazel H.
 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Population Projections 1980, 1990. Pop. Ser. 70, No. 9.

Dept. of Rural Sociology. University of Wisconsin. Jan.
1973.

Rice, Rodger R.
Beegle, J. Allan
Michigan State University, East Lansing, MI 48823

Differential Fertility in a Metropolitan Society. Rural
Sociological Soc. Mono. No. 1. West Virginia
Univeristy. Morgantown. 1972.

Rieger, Jon H.
Michigan State University, East Lansing, MI 48823

Geographic Mobility and the Occupational Attainment of
Rural Youth: A Longitudinal Evolution. Rural Sociolo-
gy 37(2): 189-207. June 1972.

A SURVEY of the literature yields a series of tentative generalizations concerning the relationship of geographic mobility to occupational attainment. These are stated as hypotheses and tested in a microlevel longitudinal study utilizing 100 percent data recovery, over a ten-year period, for a sample of male former high school students from a rural area of Michigan. Findings show that (1) most of the young men left their home communities before the end of the decade, (2) most who left moved to urban areas, (3) migrants exhibited higher subsequent occupational attainment than nonmigrants, (4) the differential attainment levels of migrants and nonmigrants appeared to be only to a small degree attributable to selectivity of migration, and (5) migrants to small cities exhibited the highest occupational attainment, followed by migrants to large cities; migrants to other rural areas ranked third; and nonmigrants showed the lowest attainment levels. Observations are made concerning the significance of migration in the career trajectories of young people from rural areas.

Riley, Marvin P.
Butler, Eugene T., Jr.
South Dakota State University, Brookings, SD 57006

South Dakota Population, Housing and Farm Census Facts:

Ranking of Counties on Population and Housing Facts
(1960-1970) and Farm Facts (1964-1969).

THIS PUBLICATION contains 118 tables ranking the 67 counties in South Dakota on basic population and housing census information and on basic information from the Census of Agriculture. This publication includes an appendix which gives all of the definitions utilized as a basis for the information in the tables. A state map showing the location of the counties in South Dakota is included. Note: Reference tables have little or no interpretation.

Sauer, Howard
Wagner, Robert
South Dakota State University, Brookings, SD 57006

Age and Sex Structure of the Population of South Dakota from 1960-1970. Ag. Exp. Sta. Bul. 599. Dept. of Rural Sociology. South Dakota State University. 1972.

SOUTH DAKOTA from 1960 to 1970 declined in population, continued previous patterns of rural depopulation, urbanization and net out-migration, experienced increases in nuptuality, and recorded declines in fertility and child mortality. Changes by age categories varied considerably, the largest loss occurring in interval 0-4, the largest gain in the 15-34 young adult group, and other increases occurring in age intervals 65- and 75+. Population redistribution from rural to urban centers was experienced in all age categories, the sex ratio declined markedly in the aged dependent population, and the number of non-whites in proportion to whites increased in all categories except 75+. Seven demographic variables were found to contribute significantly to the explanation of the variation observed in the number of children under five for South Dakota from 1960 to 1970. Changes in the number of children under five were found to principally a function of changing fertility patterns on the part of the second population, particularly white resident females age 15-34.

Wagner, Robert T.

South Dakota State University, Brookings, SD 57006

Reference Tables: Population Change of Counties and Incorporated Places in South Dakota, 1950 to 1970. South Dakota Agr. Exp. Sta. Bul. No. 586. July 1971.

THE BULLETIN presents seven tables containing the population number, percent, and rank order of South Dakota counties and incorporated places 1950 to 1960, 1960 to 1970, and 1950 to 1970. Note: Reference tables have little or no interpretation.

Wagner, Robert

South Dakota State University, Brookings, SD 57006

South Dakota Population and Net Migration 1960-1970.
South Dakota Agr. Exp. Sta. Bul. No. 580. Feb. 1971.

SOUTH DAKOTA population growth is discussed in relation to net-migration. Births, deaths, natural increase, and net migration figures for planning districts as well as counties are examined.

This study examines population shifts and migration for the most intercensal period and compares it with the 1950-1960 decade. South Dakota experienced a 2.1 percent population loss between 1960 and 1970, the first loss since the thirties. Migration from rural to urban areas continued, but the growth of the urban population was the lowest in the state's history (11 percent). This was due chiefly to a decline in the growth rate for cities over 10,000. The state's rural population declined nearly 11 percent. The existence of an urban place in the county had little holding effect on the rural population. South Dakota had a net out-migration rate of 13.6 percent.

Rural Manpower Center
Michigan State University, East Lansing, MI 48823

Mexican Americans in Transition: Migration and Employment in Michigan Cities. Center Reports Nos. 22-25.
Michigan State University. East Lansing. March-Dec. 1971.

Taeuber, Karl E.

The Residential Redistribution of Farm-Born Cohorts.
Rural Sociology 32(1): 26-36. March 1967.

Tait, John L.

Johnson, Arthur H.

Iowa State University, Ames, IA 50010

Iowa Population Trends. Iowa Coop. Ext. Serv. PM. 517.
Sept. 1971.

THE SIGNIFICANT population trends that have occurred in Iowa during the past twenty years are examined in this publication. The data include trends in number of inhabitants, birth and death rates, rural-urban residence, race, age structure, and migration in metropolitan and nonmetropolitan counties.

The major factor contributing to population changes in Iowa has been the continuing advances in agricultural technology which have resulted in a declining number of farm families. A sufficient increase in other economic sections in rural counties has not occurred to affect agricultural employment decline. Since, however, the net out-migration rate has decreased in the last ten years, it is perhaps the potential for further large-scale migration from farms has been reduced. The selectivity of migration must be considered when evaluating services needed in communities. Since significant out-migration occurs in the young adult categories, leaving a progressively aging population, an awareness of population trends is necessary in order to constantly re-evaluate the needs of communities. The appendices provide data on county population trends in 1950-1970 and the age structure of Iowa's population in 1960-1970.

Thomas, Donald W.

Ohio State University, Columbus, OH 43210

Reference Tables: Population Change of Counties and Incorporated Places in Ohio, 1950-1970. Ohio State University Dept. of Agr. Econ. and Rural Soc. ESO No. 80.
May 1972.

THIS WORK contains tables indicating the number of inhabitants and decennial population change for counties and incorporated places in Ohio arranged in order of size, magnitude of change in population, and alphabetically. Note: Reference tables contain little or no interpretation.

Ohio State University, Columbus, OH 43210

Small Town Growth and Decline in Ohio. Ohio Report 57
(1): 12-13. Jan.-Feb. 1972.

THIS STUDY includes all incorporated places in Ohio under 10,000 population. Population change between 1960 and 1970 was determined by size category for these places. There is a linear and positive relationship between growth and population size. Places with less than 500 inhabitants showed the least growth with an approximately equal number increasing and declining. Towns in metropolitan counties showed greater growth than those in nonmetropolitan counties for all size categories examined. For the towns in metropolitan counties, the relationship between size and population change is linear as in the case of the entire population of places under consideration. For those in the nonmetropolitan towns, the relationship is curvilinear with places of 1,000 to 2,500 showing the highest growth rate.

Places near large urban centers exhibit greater growth than those in outlying areas. Small towns in metropolitan areas often serve as "dormitory" communities. With the decline in the number of farmers and the changing character of the farm enterprise, many of the towns in nonmetropolitan counties have lost many of their original functions as farmers trade in large towns.

Mitchell, John
Ohio State University, Columbus, OH 43210

More People in Older Age Groups. Ohio Farmer. Oct. 20, 1973. Ohio State University Dept. of Agr. Econ. and Rural Soc. and Ext. Rural Soc.

THIS ARTICLE discusses the structure and composition of Ohio's population emphasizing the increasing percentage of older people in many counties. The more rural the county, the higher percentage of young people leaving and the higher the percentage of aged in the population. Generally, those counties which are growing are either adjacent to a major city or have universities. Emphasis is placed on making rural people aware of the necessity of providing for a growing number of elderly people. It is suggested that multi-county efforts would be fruitful.

U.S. Senate Committee on Agriculture and Forestry.
United States Department of Agriculture, Washington,
D.C.

Characteristics of U.S. Rural Areas with Noncommuting Population. Report prepared by Econ. Devel. Div. ERS. USDA. U.S. Government Printing Office. Washington, D.C. 1972.

Voelker, Stanley W.
Ostenson, Thomas K.
North Dakota State University, Fargo, ND 58102

Net Migration and Population Change in North Dakota, 1960-1970. Farm Research 28(4): 6-10. North Dakota Agr. Exp. Sta.

THE PURPOSE of this publication is to present net migration estimates for North Dakota counties and to discuss population changes in the past decade. The major components of population change were calculated for each county in North Dakota. Results indicate that the state population has decreased by nine percent between 1930 and 1970 due mostly to out-migration.

Net out-migration rates for North Dakota reflect the steady decrease in rural farm population and a growing concentration in urban areas. Population change can partly be attributed to a decline in agricultural employment and an inadequate number of jobs in other economic sectors in rural areas.

Ostenson, Thomas K.
North Dakota State University, Fargo, ND 58102

Populations Changes Within Census County Division in
North Dakota. North Dakota State University Agr. Econ.
Rpt. No. 75. March 1971.

THIS REPORT presents statistics on the number of inhabitants of each census county division in North Dakota for the census years 1950, 1960, and 1970. Maps in the report show counties, census county divisions, and places in the state as used by the Bureau of the Census for the 1970 Census of Population.

Zuiches, James J.
Michigan State University, East Lansing, MI 48824

In-Migration and Growth of Nonmetropolitan Urban Places.
Rural Sociology 35(3): 410-420. Sept. 1970.

II. ECONOMIC OPPORTUNITIES, EMPLOYMENT, AND INCOME

Bjorlie, Wayne E.
North Dakota State University, Fargo, ND 58102

Projections of Labor Supply in Southeastern North Dakota. Unpublished M.S. thesis. Dept. of Agricultural Economics. North Dakota State University. July 1973.

THE OBJECTIVE of the study was to determine whether the probable magnitude of outmigration for the period 1970-1980 could be estimated by projecting the labor force and employment. Outmigration was considered to result from an excess of the labor force over employment.

Data from previous Census of Population reports were projected to 1980 in order to determine the size of the population base of the regional labor force. A labor force participation rate by 1980 was developed and applied to the population projection to obtain an estimate of the labor force for 1980. The estimated size of the labor force in 1980 was 45,422 workers.

Total employment in 1980 was derived from estimates of 1980 gross business volume in the regional economy. Output per worker ratios were developed from secondary data, projected to 1980, and applied to the estimates of gross business volume. Several different employment estimates for each sector were thus obtained.

The appropriateness of each of the several employment estimates cannot be determined except by a series of subjective judgments regarding the expected magnitude and nature of the region's economic growth and expected amount of increase in labor productivity. For this reason, several estimates of future outmigration were computed.

Braschler, C.
University of Missouri, Columbia, MO 65201

Importance of Manufacturing in Area Economic Growth.
Land Economics 47(1): 109-111. 1971.

Broadbent, Emer E.
University of Illinois, Urbana, IL 61801

Coordination in the Corn Belt Pork Industry. Symposium:
Vertical Coordination in the Pork Industry. Chpt. 9,
pp. 46-67. Avi Publishing Company. Westport, CT.
1972.

THE MERITS of integrated farming should be judged on the basis of expected improvements for the well-being of our population. Coordination may be achieved through:

- (1) Large-scale swine breeding, farrowing, finishing, and direct selling programs to packer-buyer organizations.
- (2) Contract feeder pig growing programs.
- (3) Packer-directed country procurement programs.
- (4) Terminal and country markets negotiating for market hogs on specification basis.
- (5) Packer and(or) feed company sow-leasing programs.
- (6) Credit expansion operations to enable butcher hogs to be grown and marketed on a steady, year-round basis.

If farm leaders refuse to lead, direct marketing systems can only be an interim step toward greater coordination in the whole pork industry.

Hinton, Royce A.
Vender, Carlos D.
University of Illinois, Urbana, IL 61801

Livestock-Feed-Meat Balance in the St. Louis Trade Territory, The. Illinois Agr. Exp. Sta. Bul. No. 712.
Aug. 1965.

THERE IS a surplus above local consumption requirements of all classes of red meat in the St. Louis trade territory, and there is a large surplus of livestock feeds. While most beef is sold at retail prices, many live cattle and hogs bought originate outside the St. Louis trade territory. More than two-thirds of the meat processed by St. Louis packers is exported, yet chain stores import 36 percent of their beef requirements, and terminal markets do not provide the volume or the kind of beef needed to satisfy local demands.

Surplus meat, livestock, and feed must compete with outside sources of local, national, and world markets. The St. Louis trade area produces three times as much meat as local consumers need. There is much surplus corn, soybeans, and forage which could further expand livestock production. Basic changes in the St Louis livestock industry will be associated with:

1. The sale of a uniform volume of low-priced but quality meat that will be competitive.
2. The organization of larger, more efficient livestock enterprises to use the available surplus feeds.
3. Production of more uniform weight and quality stock.
4. Relocation or rebuilding of absolute slaughtering facilities.
5. The development and expansion of better meat outlets in the Southeastern and Southwestern United States.

Perkinson, Steve R.
University of Illinois, Urbana, IL 61801

Operational Efficiency of Illinois Country Hog Markets.
Agricultural and Economics Research Report 110. Dept.
of Agricultural Economics. University of Illinois. May
1971.

THE AVERAGE cost of operating country markets was found to be 53 cents per hog. Labor cost 28 cents per hog and was over twice as high for small markets as for large markets. Only three of 48 markets received enough revenue from packer commissions and service fees to cover operational expenses. The fees barely covered the unit labor cost.

Country markets only operated at 75 percent capacity, with even the most efficient markets able to handle one-third more volume. Market flow varied by 50 percent between the peak-volume month (September) and the low-volume month (July).

Local dealers may recover operational costs by (1) employing low-cost labor, paying low prices to producers, absorbing wider trading margins, and buying heterogeneous lots at a low average price; (2) by sorting out uniform lots and absorbing the trading margins by selling to high-paying outlets; or (3) by getting producers to perform many of the marketing services and subsidize marketing costs. The key marketing problem is to obtain adequate market representation in trading.

Sullivan, James D.

University of Illinois, Urbana, IL 61801

Interregional Flow of Slaughter Cattle and of Carcass, and Retail Beef in the Forty-eight States. Illinois Agr. Exp. Sta. Bul. No. 112. Aug. 1965.

THIS STUDY concerns the spatial marketing characteristics of carcasses, primal cuts, and retail cuts of beef in the 48 contiguous states. It incorporates cattle slaughtering, centralized processing of primal and retail cuts, and product distribution into an optimum spatial pattern for the U.S. beef industry. This study differs from previous spatial analyses in that it considers together rather than independently four major modes of transportation--truck, iced railroad car, mechanically refrigerated railroad car, and piggyback (truck or freight car). Also, the flow of three forms of fresh beef--carcasses, primal cuts, and retail cuts--in addition to that of slaughter cattle is discussed.

The other primary feature of this study is the construction of a mathematical model to synthesize the total regional cost functions for cattle slaughtering, processing, and the distribution of primal and retail cuts of beef.

This analysis incorporates the centralized processing of primal and retail cuts of beef and the resulting interregional flows into a framework of the American beef-packing industry. Although the results obtained were largely conditioned by the data available, the interregional activity analysis

model represents a useful economic tool for analyzing actual industry problems, particularly ones such as whether the industry should move toward centralized processing as the major method of handling and distributing its product.

DeLong, James W.
South Dakota State University, Brookings, SD 57006

Manpower Training Programs in South Dakota: Socioeconomic Attributes of Participants Associated with Training Outcomes. Unpublished M.S. thesis. Dept. of Rural Sociology. South Dakota State University. 1972.

Dimit, Robert M.
Wagner, Robert T.
South Dakota State University, Brookings, SD 57006

Manpower Training Program Outcomes: Indians and Rural Whites in South Dakota. Paper presented to Rural Sociological Society. Aug. 1973.

THIS PHASE of the project (what project?) deals with two manpower programs designed to bring participants to the point of being employable in the job market. The Manpower Development and Training Act Program involves a classroom training approach, and the job opportunities in the Business Sector program involve an on-the-job-training situation. The sample included 202 trainees in the M.D.T.A. program and 157 in the J.O.B.S. program during 1970 and 1971. Success was defined as completion of the training program, and the association of selected socioeconomic variables with success was analyzed.

Five socioeconomic variables were significantly associated with success in the M.D.T.A. program: sex, race, certification as disadvantaged, formal education, and length of previous unemployment. Only two of the socioeconomic characteristics were significantly associated with completion of the J.O.B.S. program: certification as disadvantaged and length of previous unemployment. Differences between the program participants' characteristics may have been related to the nature of the training: classroom type versus on-the-job.

Doxtader, Michael
 Kansas State University, Manhattan, KS 66506

Feed-Livestock Balances in Kansas. Unpublished M.S.
 thesis. 1973.

SUBSTANTIAL increases in livestock production in Kansas have been more than matched by increases in feed grains. For the 1966-67 feed year (Oct. 1-Sept. 30), Kansas had a feed grain surplus of 2.3 million tons. In 1971-72 the surplus was 4.6 million tons. Thus, grain is available for the finishing of an additional 2.1 million head of cattle or 5.5 million hogs or any combination of cattle and hogs in that ratio.

Gilbert, Howard A.
 South Dakota State University, Brookings, SD 57006

Attitudes of Some South Dakota Farmers Towards Residential and Vocational Changes. Coop. Ext. Serv. Econ. Newsletter No. 13. Jan. 25, 1973.

NINETY-ONE past and present farmers and ranchers were interviewed to study residential and vocational mobility. Farming or ranching was considered to offer superior income opportunities but with higher risk. Neither prestige nor leisure differentiated farm from nonfarm vocations. A rural environment was identified as a superior place to raise children and as a less-costly place to support a family. Residential convenience was considered a function of the proximity to the primary employment of the head of the household.

Unavoidable exits from farming due to noneconomic factors were rare. Vocational immobility was most obvious on the part of farmers (believing themselves to be) without vocational alternatives. Part-time farming was most commonly sought for security reasons. Respondents were generally satisfied with their vocational changes, although incomes exceeding expectations were more commonly satisfying than were increases in income.

 South Dakota State University, Brookings, SD 57006

Attitudinal Study of Vocational and Residential Changes,
 An. South Dakota Research Farm and Home. Vol. 24, No.
 1. South Dakota Agr. Exp. Sta. South Dakota State Uni-
 versity. Spring 1973.

THE CONSISTENT decline in the number of farmers in South Dakota suggested a need for a study of the related adjustment process. Ninety-one farmers and ex-farmers compared farm with nonfarm vocations and residences.

Considerable movement of respondents into and out of farming resulted in comparable vocational satisfaction to full-time and ex-farmers. These respondents commonly realized improved incomes by the shift. Respondents less commonly found vocational satisfaction by entering part-time farming, particularly in seeking security.

Vocational immobility as it relates to farming holds farmers in farming because of a lack of viable alternatives, especially as determined by training and experience. No evidence was found that an involuntary exit from farming is a greater problem than most labor adjustments.

 South Dakota State University, Brookings, SD 57006

Farmers View... Vocational and Residential Adjustment, An Attitudinal Study with Particular Implications for Public Policy. South Dakota Agr. Exp. Sta. Bul. No. 609. April 1973.

FARMERS-AND ex-farmers were interviewed to study their vocational and residential experience and their comparisons of farm and nonfarm work and residence. Farming offered superior income but higher economic risks. Prestige and leisure failed to differentiate between the two. A rural area was believed to offer a superior place to raise children and a place for less-costly family living, although residential convenience was a function of proximity to the primary employment of the head of the household.

Exits from farming were likely to be due to economic practicality or other voluntary reasons. Most mandatory exits were due to noneconomic factors. Vocational immobility was primarily related to farmers without known alternatives. Security was the most prominent goal of those entering part-time farming, although part-time farmers were generally less satisfied than the full-time farmers or the ex-farmers.

Hathaway, D.E.
North Carolina State University, Raleigh, NC

Improving the Search for Employment. Creating Opportunities for Tomorrow. Agricultural Policy Institute. North Carolina State University. 1968.

Heady, Earl O.
Sonka, Steven T.
Iowa State University, Ames, IA 50010

Income and Employment Generation in Rural Areas in Relation to Alternative Farm Programs with Special Emphasis on the North Central Region. North Central Regional Center for Rural Development Res. Rpt. Iowa State University. 1973.

Helgeson, Delmer L.
Zink, Maurice J.
North Dakota State University, Fargo, ND 58102

A Case Study of Rural Industrialization in Jamestown, North Dakota. Agricultural Economics Report No. 95. North Dakota State University. Oct. 1973.

THE FEASIBILITY, costs, and benefits of incorporating a manufacturing sector into a local economy dominated by agriculture was evaluated in a community in east-central North Dakota. A case study approach was used in investigating the location factors considered most important to manufacturing firms when choosing a plant site, the economic impact of industrialization within the host community, and the employee acceptance of manufacturing employment.

Location factors unique to the case study community were evaluated by questionnaire response from four manufacturing firms that located at Jamestown, North Dakota, and four firms that had considered Jamestown as a site. Factors designated of greatest influence to site selection were community attitudes toward industry, grants and concessions made available to manufacturing firms, and labor-related factors. Positive factor evaluations related to the labor resource were: labor costs, willingness of local workers, a large supply of trainable labor, labor laws (right-to-work law), and labor unions. Factors considered a negative influence were: lack of subcontractors, proximity to other industry by-products, and a shortage of skilled labor.

Kelley, P.L.
McCoy, John
Manuel, Milton
Kansas State University, Manhattan, KS 66506

The Competitive Position of Kansas in Marketing Hogs.
Kansas Agr. Exp. Sta. Tech. Bul. No. 118. Oct. 1961.

SPATIAL equilibrium analysis indicates Kansas is in a relatively strong competitive position to market hogs-- especially in supplying pork requirements of the Southwest and West Coast.

Leske, Gary Warren
South Dakota State University, Brookings, SD 57006

Pilot Programs in Off-Farm Agricultural Occupations.
South Dakota Agr. Exp. Sta. Bul. No. 612. May 1973.

McCoy, John H.
Kansas State University, Manhattan, KS 66506

The Competitive Position of Kansas in Marketing Beef.
Kansas Agr. Exp. Sta. Tech. Bul. No. 129. Aug. 1967.

DEMAND for beef is projected to increase approximately three percent per year. Kansas has feed supplies available

to increase fed beef production. Most of the beef produced in Kansas traditionally has moved to eastern and southeastern markets. By 1975 Kansas beef is expected to move to western markets on a regular basis.

 Kansas State University, Manhattan, KS 66505

Hog Production and Marketing Trends. Dept. of Economics. Kansas Exp. Sta. paper. Kansas State University. May 1973.

THIS PUBLICATION is a compilation of hog marketing density by county, feed grain surplus deficit by county, and potential additional hog production by county in Kansas along with charts showing trends in hog production by crop reporting district. This type data is considered essential by packers in evaluating the feasibility of plant location.

 Kansas State University, Manhattan, KS 66506

Kansas is Leading in Hog Increase. Pig Tales. Kansas Pork Producer's Council. Aug. 197..

THE INCREASE in swine production in Kansas since 1965 (165 percent) exceeds that of the major Corn Belt states. Hog slaughter, however, is not keeping pace. In 1965 Kansas packers slaughtered more hogs than were raised in the state. Since 1967 Kansas producers have raised more hogs that are slaughtered in state. Kansas is in a strong competitive position to ship pork west and southwest.

 Kansas State University, Manhattan, KS 66506

This Business of Beef. The Kansas Stockman. 2044 Fillmore Street, Topeka, KS 66604. Vol. LVIII, pp. 8-9. July 1972.

IN A SCANT 12 years (1960 to 1972), the Milo Belt (Central and Southern Plains states) has wrested dominance in cattle feeding away from the Corn Belt. In 1960 the Milo Belt fed 26 percent of U.S. cattle; California and Arizona, 16 percent; and the Corn Belt, 38 percent. By 1972 the percentages, respectively, were 49, 11, and 26 percent. The development of hybrid milo and the availability of irrigation have given the Milo Belt a competitive advantage.

North Central Regional Center for Rural Development
Iowa State University, Ames, IA 50010

Rural Industrialization: Problems and Potentials.
Ames: Iowa State University Press. 1974.

INCLUDES papers presented at a conference on rural industrialization at Purdue University. Organizes and interprets existing knowledge on industrialization as a means of realizing greater employment and incomes in rural areas.

Olson, Ross
Kansas State University, Manhattan, KS 66506

Changes in the Livestock Economy of Kansas. Kansas Agr. Exp. Sta. Bul. No. 538. 1970.

A TREND toward fewer and bigger livestock units has been apparent for several years. In 1940 three-fourths of all Kansas cattle feeders handled 25 or fewer head, and the cattle they fed amounted to 23 percent of total fed-cattle marketings. In 1967 this category of feeders fed only four percent of the cattle. In 1940 slightly more than two-thirds of the hogs in Kansas were from units marketing 50 or fewer head. In 1967 herds of that size accounted for only 7.5 percent of the hogs.

Olson, Ross
Kansas State University, Manhattan, KS 66506

Structural Changes in the Livestock Economy of Kansas.
Unpublished M.S. thesis. Kansas State University. 1967.

ANALYSIS shows trends in degree of concentration in production and marketing of grain-fed cattle, non-grain-fed cattle, and swine at the producer level. Virtually all growth in cattle feeding has been in relatively large commercial feed yards. Relatively little concentration is apparent in non-grain-fed cattle operations. Swine production shows a relatively moderate tendency toward concentration.

Patrick, Neil A.
 Heady, Earl O.
 Iowa State University. Ames, IA 50010

Development and Application of a Model for Multi-County Rural Community Development. Center for Agricultural and Rural Development Res. Rpt. 52T. Iowa State University. 1974.

Scott, John T.
 Broadbent, Emer E.
 University of Illinois, Urbana, IL 61801

A Computerized Cattle Feeding Program for Replacement and Ration Formulation. Illinois Agricultural Economics. July 1972.

THE PAPER presents a method which combines important elements of a cattle feedlot program: maximization of returns above variable costs per time period, assessment of alternative replacements of the feedlot, discounting future income, and minimum cost ration formulation based on research findings on body weight maintenance as differentiated from requirements for gain.

Cattle buying and selling activities and financial components are added. The model can be used in a decision context for feedlot replacement and ration formulation and in assessing new costs with other types of complementary decision models.

Sonka, Steven T.
Heady, Earl O.
Iowa State University, Ames, IA 50010

American Farm Size Structure in Relation to Employment and Income Opportunities for Farms, Rural Communities and Other Sectors. Center for Agricultural and Rural Development Res. Rpt. 48. Iowa State University. 1974.

Yorgason, Wayne
Kansas State University, Manhattan, KS 66506

Developments in the Kansas Livestock and Meat Industry. Unpublished M.S. thesis. Kansas State University. 1967.

GROWTH in the Kansas livestock industry (cattle, hogs, and sheep) is compared to that of other regions. Cattle feeding stands out as an industry of significant growth potential and portends growth in the packing industry. To date, however, growth in meat packing in Kansas has not kept pace with growth in cattle and hog production.

Zimmerman, Gerald
Kansas State University, Manhattan, KS 66506

Spatial Price Differentials for Swine. Unpublished M.S. thesis. Kansas State University. 1969.

PRICE surfaces were developed for slaughter barrows and gilts. Price gradients indicated lower prices in interior markets as compared to coastal and large city markets.

III. ECONOMIC SERVICES

Advisory Commission in Intergovernmental Relations
Washington, DC 20575

State-Local Revenue Systems and Educational Finance. A
report presented to the President's Commission on School
Finance. Washington, D.C. Nov. 15, 1971.

Alexander, R.W.
Walters, J.V.
Clanton, AL 35045

Clean and Green (monograph). The Board of Revenue and
Control and the Municipalities of Chilton County,
Alabama. Clanton, AL. 1969.

Belter, Wesley R.
North Dakota State University, Fargo, ND 58102

County Government Costs in North Dakota. Unpublished
M.S. thesis. Dept. of Agricultural Economics. North
Dakota State University. Sept. 1970.

THE AUTHOR assisted Census Bureau personnel to define
Census County Division boundaries in North Dakota. Approxi-
mately 200 new CCD's will provide detailed census data for
subcounty areas and municipalities of 1,000 or more popula-
tion.

The thesis showed that those public services supplied by
county governments and wholly supported by property taxes
ranged from \$29.76 for 1,345 population to \$6.27 for 19,051
population in adjoining counties in the state. This did not
include education, highways, or public welfare. Ninety per-
cent of the variation in cost of county government--excluding
education, highways, and public welfare--was explained by

variations in population numbers. A change in functional reorganization among counties was not considered to be likely to shift public costs to the private sector.

Berry, Russell L.
South Dakota State University, Brookings, SD 57006

Alternative Controls for Public Grazing Lands. Paper presented at Western Economics Assn. Mtg. Claremont, CA Aug. 1973.

WHAT CONTROLS are necessary to achieve the maximum net public benefit from the 273 million acres of federal grazing lands in the West? In theory federal ownership like private ownership provides a high degree of control through the "three F's": (1) fixity or security of tenure, (2) freedom to improve, and (3) fair land charges. In this article evidence is presented that the federal government, to achieve its goals, must do what any private landlord with large holdings has found it must do: it must give its farmers or ranchers the incentives for wise use of land, conservation, and improvement. Thus it must give them a high degree of the "three F's" by lease or permit, reserving to itself only those rights that are essential for the maximum public benefit where multiple use appears to be desirable. The recommendations of the Public Land Law Review Commission in its 1970 report, One Third of the Nation's Land, are found to be inadequate or counter-productive, and alternatives are proposed that would provide more of the three F's.

South Dakota State University, Brookings, SD 57006

Break-Even Analysis: A Practical Tool in Farm Management. American Journal of Agricultural Economics 54(1). 1972.

South Dakota State University, Brookings, SD 57006

Break-Even Charts: A Tool for Better Farm Management.
Journal of American Society of Farm Managers and Rural
Appraisers 36(1). April 1972.

South Dakota State University, Brookings, SD 57006

Economics of Single Versus Multiple Plant Farms for Crop
 Production. June 1973. (Mimeo.)

IN MUCH OF the research on farm size or scale, research workers have assumed constant crop yields, constant land changes, and constant variable costs with little increase in management costs. As a result they conclude that the long-run, average cost curve for farms of different size is nearly horizontal, and hence large scale farming is highly profitable. In this article these assumptions and conclusions are challenged.

First, the history of failures of large-scale crop farming in the Midwest suggests that maintaining high yields at nearly constant costs with hired labor is unrealistic. Second, the assumption that land changes will remain constant as size is increased is refuted by land values at the edge of growing cities and public works. Most farmers are keenly aware that they need more land, but it is often only available at prohibitive costs. Third, if hired labor could be induced to produce as efficiently as independent family farmers, there would be many more farms operated by hired managers rather than tenants. Fourth, after the optimum proportions have been achieved for a one-man farm, the manager, if he is to expand his business, must add another plant that, at a minimum, must consist of another man, another set of machinery, and another block of cropland comparable to the first if expansion beyond the one-man family farm is to be equally profitable. This "double or nothing" situation is a barrier to growth in farm size. Similar barriers appear each time another man with complement of machinery is added and is indicated by a wavy rather than a smooth, long-run average cost curve for any given firm.

 South Dakota State University, Brookings, SD 57006

Family Farms vs. 'Factory' Farms. The Farmer. St. Paul, MN. Feb. 6, 1971.

 South Dakota State University, Brookings, SD 57006

Farm Size and the Control of Agriculture. Aug. 1973.
 (Mimeo.)

THIS ARTICLE presents trends in farm numbers, sizes, and organizations which show that family farms are rapidly becoming larger but that many are still too small to provide satisfactory family living. Evidence that large family farms eventually reach a double-or-nothing impasse is also presented. This happens when any significant increase in output requires, for comparable efficiency, another man, another line of machinery, and nearly double the cropland. Historically at this point landowners have found it desirable to sell or lease the additional land to another independent farmer. The problem of providing hired men with incentives for efficient farm production has never been resolved (e.g., Russian experience). Hence, laws to limit farm size do not appear to be needed. In any event most such laws enacted have proved to be effective.

 South Dakota State University, Brookings, SD 57006

Farm Tenure Goals and Aversive Share Tenancy Controls. Paper presented at American Agr. Economics Assn. Jamesville, FL. Aug. 1972.

WHO WILL control U.S. agriculture? How? Will these controls be better or worse than present controls? The answers depend upon the goals sought. Wise use, conservation, and improvement of land are widely accepted as goals. Land ownership by farmers has long been a goal, not only for its effects on the farm family but also on the land itself.

Ownership provides the "three F's": (1) fixity or security of tenure, (2) freedom to improve, and (3) fair land charges (rents) that are strong incentives to conserve and improve. This article presents the view that the farmer's freedom and independence can be preserved even though the land is held by nonfarmers, provided there is a shift from share rents with their aversive control of insecure tenure to cash rents which, because they are objectively determined in advance, do not require aversive controls to secure for the landlord "a good job of farming and a fair rent." The argument that share rents (with or without cost sharing) is a satisfactory system is questioned.

 Folkerts, William
 South Dakota State University, Brookings, SD 57006

Economics of Farm Size in Western United States. In Federal Public Land Laws and Policies Relating to Intensive Agriculture. Vol. 5. Published for Public Land Law Review Commission, Washington, D.C., by Economics Dept. and South Dakota Agr. Exp. Sta. South Dakota State University. April 30, 1969.

 O'Rourke, Paul
 South Dakota State University, Brookings, SD 57006

Federal Public Lands: Goals, Issues and Alternatives. In Federal Public Land Laws and Policies Relating to Intensive Agriculture. Vol. 3 published for Public Land Law Review Commission, Washington, DC, by Economics Dept. and South Dakota Agr. Exp. Sta. South Dakota State University. April 1969.

Bowles, Samuel
 Columbia University, Columbia, NY 10025

Toward an Educational Production Function. In W. Lee Hansen, ed., Education, Income and Human Capital. Columbia University Press. New York. 1970. pp. 1-61.

Clayton, Kenneth C.
Purdue University, Lafayette, IN 47907

Evaluation of the Economic Feasibility of a Regional Solid Wastes System for the Southwestern Indiana and Kentucky Council of Governments Regions, An. Unpublished M.S. thesis. Purdue University. Jan. 1972.

THE GENERAL purpose of this study was to evaluate the economic feasibility of a regional solid wastes system. Location theory was reviewed to establish the determinants of a solid wastes disposal site location decision. These determinants were found to include the cost of transportation (collection) and the cost of processing (disposal). These costs provided the basis for the model that was used. The sanitary landfill was selected as the most relevant disposal method, and appropriate cost functions were developed. Due to a lack of reliable empirical cost data, the disposal cost estimates were synthesized using an economic-engineering approach.

Several alternative formulations of the regional system were also considered in an effort to determine if an economically feasible regional system exists.

Huie, John M.
Purdue University, Lafayette, IN 47907

Sanitary Landfill Cost. Coop. Ext. Serv. Bul. No. EC-412. Purdue University. 1972.

THIS CIRCULAR is intended to help community planners and leaders in the provision of the solid waste management service. It provides a guide for estimating the costs of solid waste disposal via the sanitary landfill. Each of the underlying cost components is considered individually. The planner using this information is free to adjust the cost components as he sees fit and estimate the total cost for his particular situation. Alternatively, the total cost function as provided in the report can be used directly.

Hule, John M.
Purdue University, Lafayette, IN 47907

Solid Waste Management: The Regional Approach.
Ballinger Publishing Co. Cambridge, Mass. 1973.

IN RECENT YEARS there has been considerable dialogue on the merits and problems associated with regionalization. Quite naturally, the solid waste management problem has found its way into this discussion. It has been suggested that the larger scale of a regional disposal facility should provide significant cost savings over individual local systems. Unfortunately, little has been done in the way of designing such regional systems and estimating what the costs might be. The commonly advanced hypothesis of lower unit cost through regional systems has never really been tested.

The economics of regionalization are explored in this book. Local (county-wide) and regional solid waste systems are specified. A theoretical and empirical basis for estimating costs and comparing alternative systems is provided. Also, a design for rural collection systems is advanced. In addition, cost functions for the disposal of solid waste via the sanitary landfill are developed. Finally, alternative regional systems of solid waste management are evaluated as to their economic feasibility. It is shown that with sufficient definition, a regional solid waste management system can be economically feasible (that is, of lesser cost than several individual county systems).

Cohn, Elchanan

Economies of Scale in Iowa High School Operation.
Journal of Human Resources 5(1): 24-31. Winter 1970.

Coleman, James S.
John Hopkins University, Baltimore, MD 21218

The Concept of Equality of Educational Opportunity.
Harvard Educational Review 38(1): 7-22. Winter 1968.

Coons, Alvin E.
 Glaze, Bert T.
 Ohio State University, Columbus, OH 43210

Housing Market Analysis and the Growth of Home
 Ownership. Bureau of Bus. Res. Mono. No. 115. College
 of Commerce and Administration. Ohio State University.
 1963.

Cosgrove, Michael H.
 Hushak, Leroy J.
 Ohio State University, Columbus, OH 43210

Costs and Quality of Water in Ohio Cities. Ohio Agr.
 Res. Devel. Center Res. Bul. No. 1052. Ohio State Uni-
 versity. April 1972.

THE PURPOSE of this study was to estimate cost functions for city water systems. Operating and maintenance cost data were available for 79 cities. Independent variables were classified as output, input, treatment, and other. Total and average cost functions were estimated by ordinary least squares.

The estimated cost function indicates that marginal costs of water flow decline with increasing system size. However, the rate of decline is probably too small to make the consolidation of water systems attractive, unless the size of the consolidated system is several times as large as the individual systems. The average cost equations indicate a rather large fixed component of operating costs. Thus, small water systems can realize cost reductions from consolidation by the spreading of this fixed component.

Measures of the impact of quality on costs suggest that the use of surface water is more expensive in terms of operating and maintenance costs. Surface source cities use more treatments, and on the average, each additional treatment adds \$9,000 per year to total costs.

Debertin, David L.
 Purdue University, Lafayette, IN 47907

An Econometric Investigation of the Provision of Public Education in Indiana. Unpublished Ph.D. dissertation. Dept. of Agricultural Economics. Purdue University. July 1973.

THIS STUDY encompasses two major objectives: (1) an analysis of the relationship between the taxable wealth, other socioeconomic characteristics of the community, and the availability of school inputs within the school, and (2) the empirical estimation of educational production functions.

Major findings of the study were as follows: Salary levels of teachers were positively related to the incomes of the families in the community. Teachers holding advanced degrees tended to be located in communities where a high proportion of the population graduated from college. Experienced teachers tended to be found in low-income communities where a high proportion of the population was over 65. Pupil-teacher ratios were lowest in school systems with high per pupil assessed valuations. The primary determinant of the availability of course offerings was found to be enrollment. Little evidence of a relationship between assessed valuation and school inputs other than pupil-teacher ratios was found.

Evidence indicated that within the range over which school administrators are able to control school inputs, an increase in school input levels would not result in a corresponding increase in any of the output measures used in the analysis. It was further concluded that educational achievement can be increased by changing the students' environment, and, in turn, students and parents attitudes toward schooling, but not by changing the inputs (educational or experience level of teachers, pupil-teacher ratios, salary levels or course offerings) of local schools.

Hule, John M.
Purdue University, Lafayette, IN 47907

People, Property Taxes and Public Schools. Indiana
Coop. Ext. Serv. Bul. EC 430. 1974.

THIS PUBLICATION summarizes part of the findings from an unpublished Ph.D. dissertation by Debertain entitled, "An

Econometric Investigation of the Provision of Public Education in Indiana." Focus of this report is on the relationship between variations in local school inputs and taxable wealth.

School inputs selected were those over which the school management can extend some control. These include pupil-teacher ratio, salary of teachers, training and experience of teachers, and course offerings.

The analysis, which also includes an estimate of the impact of socioeconomic characteristics of the community, found little evidence of a relationship between assessed valuation and school inputs other than pupil-teacher ratios.

Salary of teachers tended to be positively related to the income of families in the community. Teachers with advanced degrees tended to be located in communities where a high proportion of the population graduated from college. Experienced teachers tended to be found in low-income communities where a high proportion of the population was over 65. The primary determinant of the availability of course offerings was found to be enrollment.

University of Kansas, Lawrence, KS 66044

Agrarianism in American History. D.C. Heath. Lexington, KY. 1970. pp. vii-xviii, 1-211.

THE READINGS are arranged to show:

1. The powerful affirmative values toward agriculture in American society.
2. Historic forces working for agricultural development and determining its course.
3. Development of agribusiness.
4. Persistence of insecurity.
5. Continuing problems of agriculture in an urban society.

University of Kansas, Lawrence, KS 66044

Agrarian Polity in an Era of Development, The. In R.L.

Stauber, Approaches to the Study of Urbanization. Government Research Center. University of Kansas. 1964. pp. 100-115.

THE MULTIPLICITY of governmental units in rural America underscores the lack of technical development aimed at restoring rural social organization. However, small towns and communities persist. Analysis shows that development programs fail rural communities, but new approaches are feasible.

University of Kansas, Lawrence, KS 66044

Modernization in a Traditional Setting: A Philippines Case Study. Civilizations 18(2): 204-231. Brussels, Belgium. 1968.

THIS IS a report of an investigation of peasant attitudes toward modernization in 1964. The town of Gapan was chosen as a site in which modernizing and traditional influences competed strongly. Land reform is a vital concern of the peasants, with an active minority expressing need for a complete overhaul of the system. Proprietors of over 15 hectares resist change. The majority accept incremental adjustments within the system. However, differences in attitudes between peasants of barrio Pambuan (most accessible) and barrio Capalangan (most isolated) were not significant.

Duncan, Marvin R.
North Dakota State University, Fargo, ND 58102

An Appraisal of the Medical Services Structure in North Dakota Planning Region No. 3. Unpublished M.S. thesis. Dept. of Agricultural Economics. North Dakota State University. 1972.

A STUDY of hospitals indicated that economic growth, accessibility, and the number of retired persons were associated with changes in the quantity and quality of hospital services. Excess hospital bed capacity was found to exist in North Dakota Planning Region No. 3. This information can be used by groups considering hospital building programs or

changing the level of hospital services.

Glover, T.F.
Ohio State University, Columbus, OH 43210

Consolidation and the Supply of Community Services.
Dept. of Agricultural Economics and Rural Sociology
Occasional Paper No. 112.Oct. 1972.

IT HAS BEEN argued that structural rigidity has played a major role in the expansion of the local public sector. The main economic criticism of local government structure stems from the alleged inability of local governments to either deal with externalities or take advantage of economies of scale in community service supply. This paper, using a simple model, graphical analysis, and simplifying assumptions, attempts to analyze some implications of consolidation to gain from benefits of cost reductions due to scale economies and draw some conclusions about the supply of community services.

Hadwiger, Don. F.
Iowa State University, Ames, IA 50010

Black Appointed Office Chiefs. Public Personnel Management. Jan.-Feb. 1973. pp. 49-54.

THIS IS a study of the 14 blacks appointed County Supervisors of Farmers Home Administration local offices in counties with significant black populations. It explores obstacles presumably to be faced, and it measures performance based upon the office loan activity and the distribution of services to black and white clients. The study concludes that there were no insuperable obstacles based on race, and that black supervisors made more loans both to blacks and whites than the average County Supervisor within their state.

Iowa State University, Ames, IA 50010

Freeman and the Poor. Agricultural History. Jan. 1971.

THIS ARTICLE compares the intentions of the Freeman Administration to its actions in four areas: people-oriented research, food assistance programs, civil rights, and housing. It explores how the policy and institutional system prevented him from any significant response in these areas.

Iowa State University, Ames, IA 50010

Public Policy Research and the Political Process. Focus on Iowa: Rural Community Development. Center for Agricultural and Rural Development. Iowa State University. 1972.

THIS STUDY suggests that research is usually done for clients who provide grants, and it measures the research outputs by functional area for Iowa State University. It provides perspectives for researchers who seek maximum freedom to pursue worthwhile research objectives.

Iowa State University, Ames, IA 50010

Rural Rental Housing (FmHA) in Iowa. Three Studies of Rural Rental Housing. Rural Housing ALLIANCE- =:.' Connecticut Avenue. Washington, DC 20036. Nov. 1971.

A SURVEY OF community leaders who organized nonprofit rural rental housing projects between 1970 and 1971 is included in this study. It reports their experience and also evaluates the program for Iowa.

Halcrow, Harold G.
Dovring, Folke
Eith, Arthur
University of Illinois, Urbana, IL 61820

School Tax Options Affecting Illinois Agriculture.
Illinois Agr. Exp. Sta. Bul. No. 744. April 1973.

THE OBJECTIVES of the study were to compare the effects on Illinois agriculture of displacing property taxes for elementary and secondary schools by increases in Illinois income, by sales taxes, or by a federal surtax, to test the general hypothesis: If the local property tax for schools is displaced by increases in other taxes, there will be gains in equity and efficiency both in the tax system and in support for schools.

Hines, Fred
 Tweeten, Luther
 Oklahoma State University, Stillwater, OK 74074

Optimal Regional Funding of Elementary and Secondary Schooling. Oklahoma Agr. Exp. Sta. Res. Rpt. No. P-669. Sept. 1972.

Hitzhusen, Fredrick J.
 Ohio State University, Columbus, OH 43210

Community Services in Rural Ohio. Ohio Report 58(5): 99-102. Sept.-Oct. 1973.

THIS PUBLICATION reviews some of the general literature on the delivery and financing of community services. It also outlines the current services provided and revenues raised by type of local government in Ohio and describes some of the primary related delivery and financing problems. Several conclusions are drawn and needed directions suggested.

 Karkouti, Said
 Ohio State University, Columbus, OH 43210

Evaluation of a Rural Solid Waste Storage and Collection System: The Wayne County "Green Box" Pilot Project. Dept. of Agricultural Economics (ESS-501), Ohio State University. Nov. 1973.

THIS STUDY was primarily concerned with evaluating a rural, solid waste, bulk refuse container ("green box") system in two townships of Wayne County, Ohio. The major objectives were to measure the impact of the system on roadside dumping, roadside mowing and ditching costs, and private time and travel costs, and to determine any desirable modifications in operation and financing of the system. Residents of the pilot area were surveyed, and the County Engineer's office and a local private hauler assisted in measuring the impact of the system on roadside littering and monitoring the volume of waste deposited at each of the box sites.

The pilot project resulted in an approximate fourfold decrease in roadside littering. The potential roadside cleanup savings from this reduction in illegal dumping in themselves would probably offset slightly more than half the cost to county and township government of implementing the "green box" system. Any net decreases in private time and travel as well as roadside mowing and ditching costs and the existence of other economic and noneconomic benefits of a "clean and green" countryside would all contribute to a more favorable ratio of benefits to costs. Direct cost of the system to township and county government was about \$7.50 per household for the 12-month pilot period.

Hoffman, Clayton O.
North Dakota State University, Fargo, ND 58102

North Dakota's First Rural Water District. Unpublished M.S. thesis. Dept. of Agricultural Economics. North Dakota State University. July 1973.

THE OBJECTIVES were to develop a guide to assist rural people in forming a rural water system, to determine factors influencing an individual's decision to join a system, and to analyze the socioeconomic impact of the system on its members and the community. Personal interviews were made with 166 members and 41 nonmembers. Officers of six associations were contacted by mail.

Value of dwelling, total water cost, and length of residence were the most important distinguishing characteristics between members and nonmembers. When the sample was separated into four subgroups--rural nonfarm, rural town, farm with livestock, and farm without livestock--81 percent of the observations were classified correctly according to membership-nonmembership by means of discriminant analysis.

Seventy-nine percent of the members expected to increase their water consumption after the system became operational. Each member expected to buy an additional \$285.00 of water using household equipment. Livestock inventories were expected to increase over \$5,000 per farm member.

Huie, John M.
Purdue University, Lafayette, IN 47907

Solid Waste Management, Storage, Collection and Disposal. Indiana Coop. Ext. Serv. Bul. EC 397. 1970.

Johansen, Harley E.
Fuguitt, Glenn V.
University of Wisconsin, Madison, WI 53706

Changing Retail Activity in Wisconsin Villages:
1939-1954-1970. Rural Sociology 38(2): 207-218. Summer 1973.

THIS ARTICLE presents an analysis of change in retail and service activities in a sample of 77 Wisconsin villages with less than 2,500 population and a review of patterns of change by individual functions. There was a general decline between 1939 and 1970 in the number of functions found in the sampled villages. The mean number of functions per village declined from 17.4 in 1939 to 15.1 in 1954 to 12.1 in 1970. Seventeen functions declined during the entire 31-year period, 14 increased in the initial period and declined in the second, and 6 functions increased during both periods or in the latter interim.

There was a strong positive relationship between number of functions and population size at all three points in time. The ratio between population and number of functions demonstrated a trend of change over time. The number of people per function increased from 42 to 49 to 68 from 1939 to 1954 to 1970. A general pattern of decline in retail functions existed among both growing and declining villages.

Lee, Warren F.
Cosgrove, Michael H.

Ohio State University, Columbus, OH 43210

Cost of Public Water Service in Ohio. Ohio Report
57(3): 42-44. Ohio Agricultural Research Development
Center. May and June 1972.

DATA on the cost of providing public water service were obtained for 79 cities in Ohio. Cost functions were estimated for both ground and surface source systems. Variables representing both the quantity and quality of the water were used to measure output.

The results indicate that there are significant economies of scale in the production of water up to 1,000 million gallons per year. The cost of treating and delivering surface source water exceeds the cost of ground water by \$39 per M.G. These results suggest that communities of less than 15,000 population should explore the possibilities of purchasing their water from nearby larger centers.

McMahon, Walter W.

An Economic Analysis of Major Determinants on Public Education. Review of Economics and Statistics 52(3):
242-252. Aug. 1970.

Meeks, Carol Boyd
Ohio State University, Columbus, OH 43210

Prediction of Maintenance and Improvement Behavior of Small Town Ohio Home Owners. Unpublished Ph.D. dissertation. Ohio State University. 1972.

THE DEVELOPMENT of a predictive model of maintenance and improvement behavior of small town home owners was the purpose of this study. A systems model was proposed including: input of demands--events, occurrent wants, and goal preferences, and resources--human, housing, and environmental; throughput or managerial system; and output of maintenance and improvement behavior and related outcomes.

Interviews were completed with 188 male heads of intact families with at least one child under 18 years of age. Each head was a home owner, between 25 and 55 years old, and phys-

ically able to do his own maintenance. He had resided in his four- to six-room, single-family detached house for at least six months. The respondents were residents of three Ohio towns between 2,500 and 5,500 population; the sample was drawn by the Iowa State Statistical Laboratory, Ames.

Deacon, Ruth E.

Ohio State University, Columbus, OH 43210

Home Maintenance in Small Towns. Ohio Report 58(1):
14-15. Jan.-Feb. 1973.

THE STUDY was designed to investigate investment and consumption orientations of Ohio home owners in small towns and relationships with 1) maintenance and improvement activities, 2) resource or skill development, and 3) interest in learning or improving skills. Data were collected from 188 male heads of intact families with at least one child under 18 years of age. Each respondent was a home owner, between 25 and 55 years of age, and not physically limited in ability to do maintenance. The families had lived in a four- to six-room single-family dwelling for at least six months. Investment and consumption orientations were measured by scaling. Items were included to measure: general housing investment, maintenance for housing investment, general housing consumption, and maintenance for housing consumption.

The investment and consumption orientations of respondents were directly related. Attitudes toward investment in housing and maintenance for investment purposes were related as were attitudes toward consumption and maintenance for consumption purposes. Only the consumption orientation resulted in differences in reasons for doing maintenance and improvement work and resource development. Men with a greater consumption orientation undertook fewer activities for reasons of wear and family need. However, they possessed higher levels of maintenance and improvement skill, undertook more costly maintenance jobs, and had greater interest in learning or improving present skill levels.

Firebaugh, Francille M.

Ohio State University, Columbus, OH 43210

Home Maintenance and Improvement Behavior of Owners.
Home Econ. Res. Journal, pp. 114-129. Dec. 1974.

THE SYSTEMS approach provided the theoretical basis for analysis of maintenance and improvement behavior. Situational determinants influencing demands and resources were analyzed as well as the influence of demands and resources on maintenance and improvement behavior. The sample was composed of 188 male heads of intact families living in small towns.

Least squares analysis revealed that: maintenance skill and time available influenced maintenance behavior; improvement skill affected improvement behavior; and goal preferences decreased with age of the head, whereas occurrent wants increased with increased age and with a decreased consumption orientation but decreased with increased house value. In relation to resources, the consumption orientation of the head affected maintenance skill and interest and improvement skill and interest; community location affected maintenance skill and interest; age and occupation of the head affected improvement skill and improvement interest.

Meyer, Gordon L.
North Dakota State University, Fargo, ND 58102

Economies of Size of County Government. Unpublished
M.S. thesis. Dept. of Agricultural Economics. North
Dakota State University. Jan. 1973.

THE OBJECTIVES were to (1) develop measurements of output for selected county government units and (2) identify variables that significantly affect annual cost per capita, cost per unit of output, and output per capita for selected units of county government.

Data from six offices in 30 counties were obtained by personal interviews. Multiple regression analysis was used to analyze the data. Independent variables were county population, taxable valuation per capita, average family income, percentage of families with an income below \$3,000, and area in square miles.

Economies of size were found with respect to population; however, taxable valuation and area of the county were posi-

tively correlated to costs per capita. The measures of output, only partial measures which did not account for quality variations, were negatively related to population.

Morse, N.
Roth, E.W.
U.S. Dept. of Health, Education and Welfare,
Washington DC 20201

Systems Analysis of Regional Solid Waste Handling. Report SW-1SC. Public Health Service, Environmental Health Service, and Bureau of Solid Waste Management. 1970

Nelson, William C.
Hardy, H.M.
Hoffman, C.O.
Meyer, G.L.
North Dakota State University, Fargo, ND 58102

Satellite Communities in North Dakota--The Present Situation and Strategies for Growth. Dept. of Agricultural Economics Misc. Rpt. No. 11. North Dakota State University. Feb. 1973.

SMALL TOWNS in North Dakota are faced with a bleak future as their traditional economic base is declining rapidly, but many small towns near urban centers are increasing their populations. Four strategies for survival of a potential satellite community are proposed in this report. The strategies are zoning, tax exemptions for new housing, commuter transportation system, and subdivision promotion. Each of the strategies appears to be feasible, and they are complementary.

Noonan, R.
Whinston, A.

An Information System for Vehicle Scheduling. Software Age. Dec. 1969. pp. 8-13.

Reinhardt, Hazel H.
 Durant, Thomas
 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Wisconsin's Upper Great Lakes Region: A Study of Two
 Communities. Pop. Ser. No. 24. Dept. of Rural Sociology.
 University of Wisconsin. Oct. 1970.

Rohrer, Wayne C.
 Douglas, Louis H.
 University of Kansas, Lawrence, KS 66044

The Agrarian Transition in America: Dualism and Change.
 The Bobbs-Merrill Co. Indianapolis, IN. 1969. pp. v-
 xi, 1-189.

THE IDEOLOGY of agrarianism survives in both urban and
 rural contexts. The reality of agrarianism has nearly
 disappeared save some cultural forms. Also in rural areas a
 percentage of "refuge" farmers persists. They are not fa-
 vored by public policy and live insecurely.

Sjo, John
 Trapp, James
 Munson, Robert
 Kansas State University, Manhattan, KS 66502

State Costs and Benefits from Education. Kansas Agr.
 Exp. Sta. Bul. No. 561. Nov. 1972.

TRADITIONALLY, the cost of public primary and secondary
 education has been borne by local districts and the cost of
 higher education, by the states. Unequal economic growth
 geographically has resulted in unequal public funding for ed-
 ucation among districts and states, thus stimulating public
 interest in alternative funding methods.

In this study it was found that in the 1960's, an addi-
 tional year of schooling increased the average Kansan's
 annual income by \$348 or the total Kansas annual wage by

about \$500 million. Not all the potential increased earning remained in Kansas. From 1950 to 1970 there was a net outmigration of 185,827 people, educated at a total expense of \$1.5 billion--an investment loss of \$75 million annually. Within the state, there was a similar net outmigration from rural to urban counties. Thus, the returns on public education did not fully accrue to the state or school district funding the investment.

Some suggestions on ways to reduce loss on investment from outmigration are included.

Trujillo, Roldan C.
Haie, John M.
Purdue University, Lafayette, IN 47907

Cost Effectiveness of the County Highway System Under Alternative Organizational Structures. Unpublished M.S. thesis. Purdue University. Jan. 1971.

THIS STUDY was designed to provide information that will be useful in assessing the cost of alternative organizational means of providing local citizens with a safe, efficient, and economical county highway system. Potential cost advantages of reorganizing the county highway systems in Adams and Wells counties, Indiana, were investigated.

The important implication of this study is that the major efficiencies existing in the departments studied can be overcome without drastic reorganization. This is particularly important to consider since the social and psychic costs of reorganization are not known. Although limited, some additional savings, primarily in labor, were estimated through reorganization.

United States Dept. of Health, Education and Welfare
Washington, DC 20201

Solid Waste Management (a series of pamphlets). Prepared by the National Association of Counties Research Foundation for the Bureau of Solid Waste Management. Environmental Control Administration. Public Health Service. Washington, DC. 1969.

Welch, Candia
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Wisconsin Upper Great Lakes Region: A Descriptive
Bibliography--1935-1968. Dept. of Rural Sociology. Univer-
sity of Wisconsin. 1969.

Yoesting, Dean
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Trade Pattern Changes of Open-Country Residents: A Longitu-
dinal Study. Rural Sociology 34(1): 85-91. 1969.

IV. SOCIAL SERVICES

Beal, George M.
 Warren, Richard D.
 Fleischman, William A.
 Iowa State University, Ames, IA 50010

Smoking Behavior. Sociology Report 88A. Iowa State University. 1971.

THIS REPORT contains a descriptive analysis of individual attitudes, beliefs, situations, and behaviors related to smoking and health. Smoking and health was the empirical arena for the report. Three hundred and seventy-five respondents were included in the nonmetropolitan random sample. A detailed discussion of the sample and methodology is presented.

Findings include a discussion of respondents' smoking behavior, sociodemographic characteristics, attitudes, and beliefs about cigarette smoking, community and personal situational factors, knowledgeability of the smoking problem, organizational participation, and awareness and evaluation of health organizations.

Becker, G.

Human Capital. Columbia Community Press. New York. 1964.

Blase, Melvin
 Gottman, Wendall
 McNabb, Cory
 University of Missouri, Columbia, MO 65201

Public Water Supply Districts: Evaluations of a New Institution. Land Economics 48(3): 273-276. 1972.

 Matson, Arthur
 Green, T.R.
 McNabb, Cory
 University of Missouri, Columbia, MO 65201

Public Water Supply Districts: Impacts in Two Areas.
 University of Missouri Ext. Serv., MP 268. Columbia.
 1972.

Blau, P.

Orientations Toward Clients in a Public Welfare Agency.
Administrative Science Quarterly 5(4): 341-361.

Braitto, Rita
 Keith, Patricia
 Klomglan, Gerald
 Iowa State University, Ames, IA 50010

Domain Consensus: A Comparison of State, District, and
 Local Agencies and Organizational Characteristics and
 Public Legitimation and Knowledge. Paper presented at
 Pacific Sociological Association Meeting. Scottsdale,
 Arizona. 1973.

THE ANALYSIS indicated that organizational variables
 relate differently to domain consensus and domain when con-
 trolling for state, district, or local level organizations.
 This implies that future analysis should not collapse data
 involving alternative organizational levels. The analysis
 also indicated that domain and domain consensus correlate
 more strongly with structural variables such as complexity
 and resource levels than with public knowledge.

Earlier research indicated that the organizational vari-
 ables of resource allocation, board composition, activities,
 domain, age, and formalization were significantly related to
 domain consensus. Also, endorsements given, resource alloca-
 tion, and activities were related to domain.

These relationships, however, were analyzed using only data from state level organizations. This paper extended the analysis to district and local organizations.

 Paulson, Steven
 Klonglan, Gerald
 Iowa State University, Ames, IA 50010

Domain Consensus: A Key Variable in Interorganizational Analysis. In Merlin B. Brinkerhoff and Philip R. Kunz, Complex Organizations and Their Environment. William C. Brown Company. Dubuque, Iowa. pp. 176-192. 1972.

THE CONCEPT of domain consensus was investigated. The first objective was to review the definition of domain consensus and delineate the variables which have been helpful in understanding and predicting domain consensus. The second objective was to empirically investigate the relationships between domain consensus and selected variables which have been associated with the study of complex organizations in general and interorganizational relationships in particular. This was done utilizing state level health-related organizations. The area of domain and domain consensus investigated was in developing agency plans to deal with the cigarette smoking problem.

Organizations were studied as to their willingness to participate in the formation of an agency concerned with smoking and health (domain) and their endorsement as to whether other organizations should participate in the smoking issue (domain consensus). Domain consensus and domain were then discussed in the context of alternative theoretical framework: exchange theory, decision-making theory and organizational change theory. Both domain and domain consensus are either implicit or explicit in these theoretical approaches and thus appear useful in understanding the processes associated with organizational change.

Bultena, Gordon L.
 Iowa State University, Ames, IA 50010

Structural Effects on the Morale of the Aged; A Comparison of Age-Segregated and Age-Integrated Communities. In (Jobert Gubrium, ed.) Late Life: Communities and En-

Environment Policy. Charles C. Thomas Publishers. 1974.

Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Family Patterns of Migrant and Nonmigrant Retirees.
Journal of Marriage and Family. Feb. 1970. pp. 89-93.

Butcher, John
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Changes in Attitudes Toward Medicare and Health Services
in Waupaca, Wisconsin--1966-1968. Pop. Ser. No. 22.
Dept. of Rural Sociology. University of Wisconsin. May
1970.

Chatkeo, Pathra
Iowa State University, Ames, IA 50010

The Comparison of Using Different Groups of Samples to
Develop Attitude Scales. Unpublished M.S. thesis.
Dept. of Sociology. Iowa State University. 1970.

THE SPECIFIC objectives were: (1) to compare the results obtained using one method of analysis (cluster analysis) to develop scales from six different types of samples, (2) to provide an understanding of cluster analysis, and (3) to define criteria for evaluating and comparing scales developed from six groups or samples.

Attitude data from a study on cigarette smoking and health were utilized to develop scales for the six groups of the total sample, only those who had never smoked, exsmokers, current smokers, males and females. The individual attitude items were scored by the certainty method. The item clusters for each of the six groups were evaluated on the basis of (1) additivity, including item-total correlations, reliability, average intercorrelation coefficient, and intercorrelation, (2) variance, including the relationship of item means and item standard deviations and the range of standard deviations, and (3) homogeneity of intercorrelations. Applying

these criteria resulted in two clusters formed for each of the six groups. The clusters and groups were then compared and evaluated.

The findings suggested that theory, objectives of the attitude measurement, and criteria assessment of scales influenced the items composing each cluster and thus are important factors to consider in attitude scale construction.

Day, L.M.

Community Facilities and Services: An Economic Framework for Analysis. American Journal of Agricultural Economics 55: 1195-1205. 1968.

Doherty, N.

Michigan State University, East Lansing, MI 48824

Economic Structure and Performance of the Medical Industry in Michigan's Grand Traverse Region, The. Unpublished Ph.D. dissertation. Michigan State University. 1970.

Michigan State University, East Lansing, MI 48824

Health Care Industries in the Michigan Grand Traverse and Copper County Regions. Michigan Agr. Exp. Sta. Res. Rpt. No. 177. Development and Public Affairs, East Lansing. 1972.

Drucker, P.

Managing the Public Service Institution. Public Interest 3 (Fall): 43-60.

Eteng, William I.

Marshall, Douglas G.

University of Wisconsin, Madison, WI 53706

Response to Hospital Treatment, Charges and Recovery in "Watertown," Wisconsin (1966). Pop. Ser. No. 17. Dept. of Rural Sociology. University of Wisconsin. 1969.

Fleischman, William A.
Iowa State University, Ames, IA 50010

Social Intervention and Audience Delineation: An Application of Multiple Discriminant Function Analysis. Unpublished Ph.D. dissertation. Sociology Dept. Iowa State University. 1973.

THE COMBINATION of the problem of audience delineation and the use of a multivariate analysis technique that can be used on categorical dependent variables provides the focus for this dissertation. The empirical referent for the audience delineation problem concerns cigarette smokers and the cessation of cigarette smoking. The hypothesis that "the audience toward whom smoking intervention programs might be directed is homogeneous" is postulated as the null hypothesis.

Audience delineation is represented as a specific problem that has relevance within the more general area of planned social change. The adoption model is used to provide a more specific frame of reference linking planned social change with the development of an audience delineation technique that might be used in smoking intervention programs. The adoption model is also used to provide a guide for categorizing people according to their smoking behavior.

Gilbert, E. Reid
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Retirement and Migration in the North Central States: Planning for Retirement. Pop. Ser. No. 21. Dept. of Rural Sociology. University of Wisconsin. March 1970.

Hassinger, Edward W.
University of Missouri, Columbia, MO 65201

Delivery of Health Services in Rural Areas, The. USDA

Yearbook. U.S. Department of Agriculture. Washington, D.C. 1971.

THIS ARTICLE gives a general statement on the rural health problem, the organization of rural health services, and selected examples of health innovations.

Hobbs, Daryl J.

University of Missouri, Columbia, MO 65201

Distribution of Health Services in Missouri, The.
Missouri Agr. Exp. Sta. Bul. No. 917. March 1967.

THE REPORT is concerned with the number and distribution of professional services in Missouri (medical doctors, osteopathic doctors, dentists, and hospital beds). Data are from professional directories for personnel and from the state's health department records for hospital beds. Data are presented by county, and emphasis is placed on the patterning of services by service center and by county. It was found that the patterning of professional health services was cumulative for centers in the form of a Guttman scale. Places which had physicians in 1950 with none in 1965 were identified (there were 197 such places). The relationship of population density and median county income to level of health services was examined.

Hobbs, Daryl J.

University of Missouri, Columbia, MO 65201

Health Service Patterns in Rural and Urban Areas: A Test Between Availability and Use. Missouri Agr. Exp. Sta. Res. Bul. No. 987. April 1972.

THE PURPOSE of this study was to examine differences in utilization of health services in rural and urban communities. The hypothesis was that utilization of services by families would be greater in communities that had more services available. Random samples of households were selected from five communities which represented gradations of size and level of services available. A total of 1,452 interviews

were made. Among the rural communities there was little difference in utilization of services which could be attributed to differences in level of services available; furthermore, the difference in utilization of health service between the urban community and rural communities was quite small. Difference in use of health services between rural and urban families was most apparent in the greater utilization of specialists by urban families.

 Hobbs, Daryl J.
 University of Missouri, Columbia, MO 65201

Relationship of Community Context to Utilization of
 Health Services in Rural Areas, The. Medical Care.
 Nov. 1973.

THIS REPORT examines the relationship of the availability of physician and hospital services to the level of utilization of health services by residents of four rural communities. The communities were selected for their cultural homogeneity and for their differences in level of health services. Random samples of households were selected in each community. The hypothesis was that a direct relationship exists between the level of health services available in a community and the amount of services used by people in the community. The data did not support the hypothesis. Overall there was little difference in utilization of health services among the four communities even though the four communities had different levels of health services available. Controlling for age and income of individuals and families did not alter the conclusion.

 Hobbs, Daryl J.
 Bishop, F. Marian
 Baker, A. Sherwood
 University of Missouri, Columbia, MO 65201

Extent, Type and Pattern of Medical Services in a Rural
 Ozark Area. Missouri Agr. Exp. Sta. Res. Bul. No. 965.
 Feb. 1970.

THIS BULLETIN presents information of perception and knowledge about health practitioners held by respondents in four rural Missouri communities. The sample consisted of 951 households randomly selected. Information was gathered on perception of family doctors and knowledge and perception of specialists, osteopaths, and chiropractors. The family-doctor relationship tends to be perceived as instrumental by the families. Families generally have knowledge of and can identify specialists. Distinctions were made between medical doctors, osteopaths, and chiropractors.

 Hobbs, Daryl J.
 Bishop, F. Marion
 Baker, Sherwood
 University of Missouri, Columbia, MO 65201

Perception of Health Practitioners by People in an Ozark Area. Missouri Agr. Exp. Sta. Res. Bul. No. 964. March 1971.

THE USE of medical services by families and individuals in four rural communities of south central Missouri is examined in this report. Random samples of households in four communities were selected; the total number of interviews was 951. The first section of the report provides a general description of medical service usage and related usage to a number of socioeconomic variables. Later sections consider the use of different types of practitioners (specialists, osteopaths, chiropractors) and more complex patterns of health service use, including family doctor relationships and referral networks.

 McNamara, Robert L.
 University of Missouri, Columbia, MO 65201

Changes in Health Behavior and Opinions Among Open-Country Families in Two Missouri Counties, 1955-56 and 1968. Missouri Agr. Exp. Sta. Res. Bul. No. 994. Jan. 1973.

THE PURPOSE of the study was to examine changes in health attitudes and behavior among open-country families

from 1955-56 and 1968. It was expected that the health attitudes and behavior in the later period would reflect the general secularization of rural society and that differences between the counties would be less in that later period. Random samples of open-country households were taken in two counties in 1955 and 1956, and the sampling procedure was replicated in 1968. Intercounty and interperiod comparisons were made on selected health behavior and attitude items. There were changes in health behavior and attitudes in the direction expected and some reduction in differences between counties. However, also apparent was the considerable stability in behavior and attitudes over this period of time.

 McNamara, Robert L.
 University of Missouri, Columbia, MO 65201

Rural Health in the United States: An Examination of Situation, Beliefs, and Organization. Quality of Rural Living. National Academy of Science. Washington, D.C. 1971.

THE PROBLEMS of rural health in the United States, including rural health status and the availability of rural health services, are reviewed in this report. The approach is to deal with health services in rural areas within the context of the medical-care system of the general society. Two structural elements of the society are treated. One is the cultural element: goals, aspirations, beliefs. The other is the organizational element: the health care system. The conclusion was reached that the rural-urban disparity in the use of health services was explained better on the basis of organizational factors than on the basis of differences in beliefs.

 McNamara, Robert L.
 Maines, David
 University of Missouri, Columbia, MO 65201

Use of Dental Services in a North Missouri County: 1956
 and 1968. The Journal of the Missouri Dental Association
51(7). Aug.-Sept. 1971.

THE PURPOSE of this report was to determine changes that took place in dental health attitudes and behavior between 1956 and 1968. Data were from a random sample of open-country households taken in 1956 (N=162) and 1968 (N=160). Items considered were: response to the questions, "How often should a person see a dentist?" and "Does the family have routine dental care?", and whether or not individuals had used the dentist during the year. Little change had taken place between 1956 and 1968. At both times an overwhelming proportion accepted the idea of regular dental care, but a much smaller percentage reported behavior consistent with this expression.

Hill, Richard C.
 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Anticipatory Socialization to the Retirement Role. Pop.
 Note No. 8. Dept. of Rural Sociology. University of
 Wisconsin. 1968.

 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Are Attitudes Toward Retirement Changing? Dept. of
 Rural Sociology. University of Wisconsin. Aug. 1968.

 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Retirement and Migration in the North Central States--
 Personal Adjustment to the Retirement Transition in
 Three Wisconsin Communities. Pop. Ser. No. 15. Dept.
 of Rural Sociology. University of Wisconsin. 1968.

Horner, James T.
 Cromer, Chalmer A.
 Mendenhall, Elton B.
 University of Nebraska, Lincoln, NE 68503

Occupational Opportunities in Nebraska, 1968, 69, 70,
 71, 72, 73. Dept. of Agricultural Economics, Ohio State
 University.

THE PURPOSES of this work were to (1) conduct annual statewide occupational opportunities' analysis of Nebraska using a computerized procedure, emphasizing inter- and intrastate coordination; (2) disseminate pertinent data from statewide analysis; (3) stimulate research, research training, and related activities in vocational education; and (4) serve as the state link in coordinating the ERIC and other information systems.

The procedures employed were to: (1) utilize advisory and steering committees to identify and advise on procedures for conducting major activities, (2) provide consultant services to identify problems, writing and research design, (3) conduct occupational needs annual study and disseminate findings, (4) maintain ERIC library service and reference library for vocational educators, (5) disseminate research findings in vocational education through newsletter, seminars, and other publications, and (6) encourage research proposals from vocational teachers.

New and redesigned education programs, increased research and related activity, and the concerted and coordinated efforts of Division of Vocational Education, the University of Nebraska, the State Colleges, and intra- and interstate agencies that are concerned with providing occupational education were determined to be contributions to education.

Hushak, Leroy J.
 Ohio State University, Columbus, OH 43210

Contribution of School and Non-School Inputs to Student Achievement, The. Dept. of Agricultural Economics, Ohio State University. 1974.

THE OBJECTIVE of this study is to estimate and analyze the relationship between learning inputs and student achievement. Emphasis is given to separating the impacts of school and nonschool learning inputs. Student study time has a positive impact and time watching television a negative impact on learning practical skills, such as arithmetic computations and spelling. The impact on more conceptual language and arithmetic skills is smaller and sometimes reversed.

The qualitative aspects of teacher and parent teaching inputs are highly substitutable. Lower-achieving students are more dependent on teachers than higher-achieving students, because they have less-educated parents and access to fewer other nonschool learning inputs. They attempt to compensate by studying more and obtaining more help from their less-educated parents, but the teacher is their primary skilled learning input. Consequently, schools have a greater marginal impact on lower-achieving students. They tend to equalize achievement among all students even when poorer quality resources, in particular teachers, are allocated to lower-achieving students. Greater equalization could be obtained by allocating the higher-quality school resources to lower-achieving students.

Ohio State University, Columbus, OH 43210

Factors Affecting Public School Expenditures. Dept. of Agricultural Economics, Ohio State University. 1974.

THE OBJECTIVE of this study is to estimate the impact of various factors which affect public school expenditures. The sample consists of all school districts in Ohio during 1968-69. The structural model consists of a social demand function and a cost function. It assumes that the private demand for public education, i.e., number of students, is exogenously determined.

Ohio school districts as a group are large compared to those in other states with an average enrollment of over 3,000 students in 1968-69. With the exception of a few rela-

tively small local districts, the statistical results indicate that Ohio school districts have exhausted economies of scale with respect to operating expenditures. Teacher experience and degree and the teacher-pupil ratio have major positive impacts on school costs. Property tax valuation per pupil (representing the inverse of the marginal social cost of education), median income, and median education all have positive estimated impacts on school expenditures.

Johansen, J.E.

Changing Retail Activity in Wisconsin Villages. Rural Sociology 38(2): 228-235.

Johnson, Glenn L.

Doherty, Neville

Sarkar, Shyamalendu

Michigan State University, East Lansing, MI 48824

Health Care Industries in the Michigan Grand Traverse and Copper Country Regions: Case Studies in Community Resource Development. Michigan Agr. Exp. Sta. Res. Rpt. No. 177. Dec. 1972.

THE OBJECTIVES of this study of Michigan's Copper Country and Grand Traverse areas were: 1) to describe each area, including its health care facilities, economic conditions, and the distributions of income and expenditures generated by the health industry, 2) to determine whether eliminating inefficiencies in the systems would improve health care significantly, 3) to determine the roles played by the health industries in the two areas, and 4) to conclude how local, state, and federal leaders can help develop their health care industries.

Ph.D. graduate students studied each area on the basis of secondary data and primary data collected directly from health care institutions. Local leadership has been extremely important in both areas. The income and resources of the Copper Country do not permit paying for an adequate health care system, but the resources and income of the Traverse City area do. It was noted, however, that considerable earlier state investments have gone into establishing the Traverse City/resource base. Because of strong local leadership, important inefficiencies in the operation of the +

health care systems were not found. Inefficiencies resulting from the monopolistic activities of drug suppliers, equipment suppliers, and MDs, themselves, were not large absolute components of the costs of operating the two medical systems; their elimination in the Copper Country would not pay for the additional medical services needed in the Copper Country. Because the Traverse City medical system is already quite adequate and has few deficiencies, the elimination of monopolistic operations would permit the Traverse City area to remedy the rather minor deficiencies in its health care system.

Klonglan, Gerald E.
 Beal, George M.
 Paulson, Steven K.
 Warren, Richard D.
 Fleischman, William A.
 Iowa State University, Ames, IA 50010

Potential of Organizational Coordination as an Intervention Process: Applied to the Problem of Cigarette Smoking and Health, The. Sociology Rpt. No. 91. Iowa State University. 1971.

GENERAL orientations to the smoking and health problem, intervention approaches, and resources of health organizations as health delivery systems were presented in this report. Organizational coordination, as evaluated on the basis of organizational interaction, intraorganizational commitment, interorganizational commitment, domain consensus, awareness, contact, effectiveness, and domain, was suggested as an intervention approach. Alternative coordination models and evaluation criteria were also presented.

Organizational characteristics related to predispositions to become involved in the area of smoking and health were delineated. Examples of desirable organizational characteristics for the establishment of interorganizational relationships for the purpose of reducing the incidence of cigarette smoking include the following: (1) utilize, initially, state levels of organizations which have most resources and authority; (2) utilize, initially, organizations which already exist as interorganizational units; (3) the organizations should be highly formal and complex; (4) organizations should have plans for expansion of their programs; (5) communication within an organization should be frequent; and (6) the organizational administrator should be a full-

time, paid employee.

Paulson, Steven K.
Iowa State University, Ames, IA 50010

Coordinating Health Organizations: The Problem of Cigarette Smoking. Sociology Rpt. No. 90. Iowa State University. 1971.

THIS REPORT presents data on health-related organizations. One hundred and fifty-six organizational administrators at the state, district, and county levels of 35 organizations composed the sample.

The empirical arena of cigarette smoking and health was discussed. Organizations were discussed as health delivery systems. The general theoretical model included the independent variables of structure, functions, processes, and administrators; the dependent variables were organizational interaction, intraorganizational commitment, interorganizational commitment, and domain consensus. Measures of each of these variables as well as of others were presented and discussed. Implications of the findings were presented in Sociology Report No. 91.

Paulson, Steven K.
Iowa State University, Ames, IA 50010

Interorganizational Coordination as a Policy for the Delivery of Health Services in Nonmetropolitan Areas. Paper presented at Rural Sociological Meetings. Denver CO. 1971.

THE GENERAL objective was to discuss research findings from a study of nonmetropolitan health organizations within a policy and value "conscious" framework. The specific topics discussed were: (1) policy and value concerns of sociological research including the research project value and policy concerns, (2) the research project design and theoretical orientation, and (3) implications of the research findings for governmental intervention policy.

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The major research focus was to determine the feasibility of, and related conditions for, a coordinated effort among health-related organizations for reducing the incidence of cigarette smoking. In-depth personal interviews utilizing structured and unstructured response frameworks for predetermined questions were utilized to gather data from 200 administrators in 35 nonmetropolitan health-related organizations.

General implications of desirable organizational characteristics for the establishment of interorganizational relationships for the purpose of reducing the incidence of cigarette smoking were developed from the data. Among others, these implications included: (1) the organization should be highly complex and formal, (2) organizations should have high resource levels, (3) organizations should have clearly defined goals and plans for expansion of the programs, and (4) "fast" communication methods such as the telephone should be used by the organization.

Paulson, Steven K.
 Rogers, David L.
 Iowa State University, Ames, IA 50010

Measurement of Interorganizational Relations: A Deterministic Model. Paper presented at American Sociological Association. New Orleans, LA. 1972.

THE OBJECTIVE of this work was to develop a deterministic measure of interorganizational relations (IOR). This was approached through (1) reviewing the major theoretical assumptions about interorganizational relations, (2) development of a multiple-item scale consistent with such assumptions, and (3) evaluation of the scale as regards its determinism and utility for future research and organizational diagnosis.

Six interrelated theoretical assumptions relevant to the measurement of interorganizational relations were identified: (1) organizations are forced with a situation of limited resources, (2) organizations must obtain resources from other units in their task environment, (3) drawing on outside resources reduces an organization's autonomy, (4) organizations prefer autonomy and engage in interaction only when resource needs cannot be met within the unit, (5) organizations prefer low level IOR and will engage in higher level IOR only after

lower levels have failed to fulfill resource needs, and (6) different levels of IOR can be ordered in terms of form and intensity of interaction. These assumptions and other theoretical schemes were operationalized.

Warren, Richard D.
Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Cigarette Smoking and Physician-Patient Interaction.
Journal of the Iowa Medical Society. 62(3): 133-135.
1972.

DOCTORS are among the health professionals who can influence the smoking behavior of patients. A recent ISU study, reported in this article, sought to ascertain the accuracy of the information held by the general public on cigarette smoking. Among the random sample studied, one-third were then smoking and two-thirds were non-smokers.

Respondents were asked about the attention they felt cigarette smoking deserved. Eighty-five percent of the sample felt that cigarette smoking needed immediate attention. Non-smokers were consistently less concerned with the cigarette smoking issue than were smokers. Respondents were also asked if parents, teachers, doctors, and other people in the health professions should set good examples and not smoke cigarettes. Ninety percent of the sample declared that such persons should set examples and not smoke cigarettes. Smokers were less likely than non-smokers to feel these persons should set examples.

Other questions in the study provided clues as to the kinds of information physicians can provide their patients. At least 10 percent, and sometimes up to 40 percent of the sample, had inaccurate information on facts related to cigarette smoking. Those respondents for whom these facts are most crucial, the current smokers, had incorrect information more frequently than did the non-smokers. Physicians are in a special position of being able to present factual data to their patients, especially to those who smoke cigarettes. This can be done through physician-patient relationships and through physician participation in public education programs.

 Warren, Richard D.
 Winkelpleck, Judy M.
 Iowa State University, Ames, IA 50010

Cigarette Smoking and the Role of Dentists. The Iowa Dental Journal. 1972.

DATA WERE presented from an Iowa State study on the perceptions of the general public on the role of dentists as exemplars. Also, data were collected on the general public's evaluation of the Dental Association. Both sets of data were collected from a random sample of 375 male and female adults in 14 Iowa counties.

Persons who smoke were compared to non-smokers on their responses to several items. Smokers were generally less concerned about the effects of cigarette smoking than were those who do not smoke. Also, smokers less frequently felt that health professionals should act as exemplars and not smoke cigarettes than did non-smokers. However, the majority of both smokers and non-smokers indicated doctors should set good examples by not smoking and should be involved in public education programs to discourage smoking.

Respondents were then asked their evaluation of the Dental Association. When respondents' awareness of the 35 organizations was studied, the Dental Association ranked twelfth. The Dental Association ranked twenty-fourth on the number of people who had had contact with it. One-fifth of the respondents felt the Dental Association should be actively involved in programs to reduce cigarette smoking.

 Warren, Richard D.
 Winkelpleck, Judy M.
 Iowa State University, Ames, IA 50010

Perceptions of Health Organizations. Paper presented at Midwest Sociological Society meeting. Kansas City, MO. 1972.

A PUBLIC Health Service-Iowa State University study in 1969 provided data for those organizations which seek to develop alternative intervention processes designed to reduce or stop cigarette smoking. Two areas of Iowa were selected for study to determine the perceptions of administrators from 35 health-related organizations and a random sample of individuals from the general public about how health-related organizations do and might function to bring about change regarding cigarette smoking.

The emphasis in the project was on the environment in which health-related organizations function. Individuals and organizations were considered as separate environments relative to an organizational program. In order to successfully implement programs for social change, one consideration is how individuals see specific organizations and how other organizations see a focal organization. Other organizations represent the potential for coordination in planning and carrying out programs with the clients for social change programs. Thus, the specific objectives with which this paper was concerned are: (1) to examine the role of organizations as an environmental function and (2) to examine data on individuals as they influence the environment for organizations to bring about change.

Warren, Richard D.
Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Research in Smoking and Health. Iowa Tuberculosis and Respiratory Disease Association TOPICS. 1972.

DATA FROM an Iowa State study on the perceptions of a random sample and of organizational administrators on the role of the Iowa Tuberculosis and Respiratory Disease Association were presented in this work.

When the respondents' awareness of all 35 organizations included in the study was examined, TB and RD was the eighth-ranked organization. More people had had contact with TB and RD than any of the other organizations. TB and RD ranked fifth in terms of organizational effectiveness. The respondents ranked TB and RD fourth on whether it should be involved in the smoking issue.

Organizational administrators were asked the extent to which their organization (1) interacted with other organizations, (2) was committed to work by itself on the smoking problem, (3) was committed to work with other organizations on the smoking problem, and (4) thought other organizations should be involved in the smoking issue. The TB and RD had the average rank of second out of the 35 organizations on these four items. Generally, TB and RD was regarded as effective by organizational administrators as well as the general public. Both also believed TB and RD should be involved in smoking and health programs. TB and RD administrators did express that their organization was not highly committed to work with other organizations on the smoking problem.

 Warren, Richard D.
 Winkelpleck, Judy M.
 Iowa State University, Ames, IA 50010

Study on Cigarette Smoking. Iowa PTA Bulletin. 1972.

APPROXIMATELY 400 male and female adults from 14 Iowa counties were interviewed about the cigarette smoking concern. About one-third of the respondents were presently smoking, and approximately one-fifth had stopped smoking. Half of the sample had not engaged in cigarette smoking.

The random sample was asked questions about 35 organizations, including the Congress on Parents and Teachers, and the organizations were ranked on responses to several questions. For example, the PTA ranked twenty-eighth out of 35 on the individuals' awareness of it and thirteenth on whether the PTA should be involved in cigarette smoking programs.

Administrators at three levels (county, district, and state) of the same 35 organizations were also interviewed. The administrators ranked PTA ninth on whether it should be involved in cigarette smoking programs. The PTA administrators ranked their organization third on commitment to work alone on the smoking issue and ranked it fourth on having a commitment to become involved with other organizations in the smoking issue.

 Warren, Richard D.

Winkelpleck, Judy M.
 Paulson, Steven K.
 Iowa State University, Ames, IA 50010

Developing Interorganizational Relations Among Health Organizations. Midwest Sociological Society Meeting. Milwaukee, WI. 1973.

THE GENERAL OBJECTIVE of the paper was to delineate how four variables and their interrelationships are important for social practitioners as they evaluate the potential for organizations to become involved in interorganizational relations (IOR). The perspective was one of planning for the development of IOR rather than suggesting how to implement actual interorganizational programs.

Data from a study on smoking and health were used to illustrate the potential use of four variables: 1) intraorganizational commitment to the problem of concern, 2) interorganizational commitment to the problem of concern, 3) past interaction of the organization with organizations in the relevant organizational set, and 4) domain consensus by organizations in the relevant organizational set.

The significant bivariate relationships imply that the organizations most amenable to interorganizational relations are those ranking high on intraorganizational commitment, interorganizational commitment, and domain consensus. Past interaction experience may increase the impact of IOR but does not seem to be a crucial variable for evaluating potential for interorganizational relations.

 Warren, Richard D.
 Winkelpleck, Judy M.
 Paulson, Steven K.
 Iowa State University, Ames, IA 50010

Interorganizational Measurement: Differences Between Hierarchical Levels of Organizations. Paper presented at 1973 Rural Sociological Society Meeting. College Park, MD.

INTERORGANIZATIONAL relations (IOR) usually have been measured by a single indicator rather than a composite measure. The purpose of this paper was to use a cumulative,

multi-item measure of interorganizational relations to assess the generalizability of IOR measures across organizational hierarchical levels.

An eight-item scale, ordered from low to high intensity of IOR, was developed theoretically and empirically. Twenty-seven hundred administrations of the items, among state, district, and county hierarchical levels of 156 health-related organizational units, were studied.

Guttman analysis was used to evaluate the empirical fit of data to the theoretical model. Three comparative frameworks were used: (1) an original theoretical ordering, (2) empirical orderings developed for each hierarchical level, and (3) three alternative theoretical orderings based on the best empirical ordering for each hierarchical level. When the primary criterion of coefficient of reproducibility was used, the scales were valid for the: (1) theoretical ordering--district and county levels, (2) empirical ordering--district and county levels, and (3) all alternative theoretical orderings--district and county levels. When we used the criterion of coefficient of reproducibility, the valid scales were: (1) theoretical ordering--district level, (2) empirical ordering--state and district levels, (3) first alternative theoretical ordering--state level, and (4) second alternative theoretical ordering--district level. Inconsistencies in valid scales among organizational hierarchical levels indicated that hierarchical level may be a moderator for IOR; level influences theoretical, methodological, and applied developments in IOR.

 Warren, Richard D.
 Winkelpleck, Judy M.
 Paulson, Steven K.
 Iowa State University, Ames, IA 50010

Interorganizational Measurement: Differences Between Types of Organizations. Paper presented at American Sociological Association. Aug. 1974.

THE PURPOSE of the paper was to use a cumulative, multi-item measure of interorganizational relations (IOR) to assess the generalizability of IOR measures across four alternative types of organizations: voluntary, public, professional, and interorganizational.

An eight-item scale, ordered from low to high intensity of IOR, was developed theoretically and empirically. The eight items were: (1) director awareness, (2) director acquaintance, (3) director interaction, (4) information exchange, (5) resource exchange, (6) overlapping boards, (7) joint programs, and (8) written agreements. Twenty-seven hundred administrations of these items were studied.

Researchers and social planners should be cognizant of the limited generalizability of IOR measures between types of organizations. The data indicated that voluntary and professional organizations may be treated similarly in evaluating how intensely a form of interaction is seen by each type of organization as involving interorganizational relations.

Lieberman, R.

Personal Influence in the Use of Mental Health Resources. Human Organizations 24(3): 231-235. 1965.

Lovan, William R.
Iowa State University, Ames, IA 50010

An Organization: Social Environment in Implementing Instigated Social Change Programs: Smoking and Health. Unpublished M.S. thesis. Sociology Dept. Iowa State University. 1971.

THE TWO major objectives were: (1) to examine the potential receptiveness of the environment (individuals as resources and clients) to a specific social change problem (smoking and health), and (2) to examine the potential receptiveness of the environment to specific health organizations (Heart Association, Cancer Society, and Tuberculosis Association) and their feasibility to act as social change agencies.

The adoption-diffusion model and the Loomis social systems model were applied as the conceptual framework for the thesis utilizing general social systems theory. The adoption model of awareness, interest, evaluation, trial, and adoption was used as a measure of social change. These theoretical formulations were used to develop a model of instigated social change within an open-systems theory of complex organizations.

Data from a research study on cigarette smoking and health were applied to evaluate the above models. A general summary of the findings indicates the appropriateness of these models of social change. Specifically, the nonmetropolitan sample was receptive to the specific social change problem of smoking and health and to the three health organizations and their feasibility to act as social change agencies in instigating social action programs for smoking and health.

Onthuan, Yupha Sirikiate
Iowa State University, Ames, IA 50010

Comparing Clusters Formed by Two Cluster Analysis Techniques. Unpublished M.S. thesis. Sociology Dept..
Iowa State University. 1971.

THIS methodological thesis had three objectives: (1) to compare the results obtained from using two-cluster analysis methods with different significant values to develop a scale from one sample, (2) to provide an understanding of cluster analysis, and (3) to define criteria for evaluating and comparing scales developed using a theoretical method and elementary linkage analysis method.

Cluster analysis is a method of defining a composite of variables which represent domains of variation in the population of variables. Criteria for adding items together to form clusters and methodological approaches for doing so are discussed.

Attitude data from a study on cigarette smoking were used to formulate attitude clusters. All items were scored using the certainty method. Clusters were developed for the total sample and statistical evaluations (item-total correlation, reliability, average intercorrelation, patterns of relationships between means and standard deviations) were presented and discussed. Alternative clustering techniques did result in scales composed of different items. Determination of the value of significance for the lower and upper critical points was an important area of the procedure.

Marshall, Douglas G.
 Hill, Richard C.
 University of Wisconsin, Madison, WI 53706

Process of Growing Old, The: A Test of the
 Disengagement Hypothesis. Pop. Note No. 10. Dept. of
 Rural Sociology. University of Wisconsin. 1968.

 Hill, Richard C.
 University of Wisconsin, Madison, WI 53706

Social Rank, Morale and Anticipatory Socialization to
 the Retirement Position. Pop. Note No. 9. Dept. of
 Rural Sociology. University of Wisconsin. 1968.

Monahan, William
 Marshall, Douglas G.
 University of Wisconsin, Madison, WI 53706

Retirement and Migration in the North Central States,
 Retired Persons in Three Wisconsin Communities. Pop.
 Ser. No. 14. Dept. of Rural Sociology. University of
 Wisconsin. June 1968.

Osburn, D.

Economics of Size Associated with Public High Schools.
The Review of Economics and Statistics 52(1): 113-115.
 1970.

 An Investment Analysis of Vocational Progress Offered in
 Missouri Junior Colleges. Southern Journal of Agricul-
 tural Economics. pp. 121-126. July 1973.

Paulsen, Arnold.
 Daft, Lynn
 Nelson, Don
 Iowa State University, Ames, IA 50010

0036

Our Poor Neighbors. Farm Foundation. National Committee on Agricultural Policy. Agricultural Policy Institute at North Carolina State University, and the Center for Agricultural and Economics Development. Iowa State University. 1970.

 Evans, Bert
 Scott, John
 Iowa State University, Ames, IA 50010

Providing Information to Community Decision Makers.
 North Central Regional Center of Rural Communities.
 1969.

THIS REPORT attempts to provide information on the scope of community development research and criteria for identifying the most valuable community development research. The report also proposes a curriculum to be taught and a plan to mobilize research capability among several states to get the priority research done. The purpose is to get that research done which will permit teaching that information which is strategic for local decision makers to improve the level of living in their rural communities.

This report, while written by researchers, is conceived from an "extension" orientation, i.e., what new information (research) is needed to engage in informal adult education. The authors have all prepared and delivered information in informal noncredit extension education programs in Iowa, Nebraska, and Illinois.

Paulson, Steven K.
 Iowa State University, Ames, IA 50010

Comparison of Causal Theories Constructed from Alternative Measurement Models of Complex Organizations. Unpublished Ph.D. dissertation. Sociology Dept. Iowa State University. 1971.

.THEORETICAL works were integrated into a multi-variate causal theory of relationships among complex organizational properties in this work. The major dependent variable was

interorganizational relations; the other variables of the theory were organizational complexity, centralization, formalization, stratification, efficiency, effectiveness, job satisfaction, and innovation. The relationships among the variables were stated asymmetrically and were represented mathematically by a set of recursive regression equations. As such, it was considered to be an initial set of causal events rather than an ongoing flow of events which could involve overidentification.

Seven measurement models were utilized, alternatively, as bases for building (via path analysis techniques) causal models where the above-described set of equations was used as the initial description of causal paths for each model. The measurement (observation manipulation) models attempted to reflect federation properties where the units of observation (interview respondents) and analysis were subunits of the federations. The particular sample studied included 8 federations and 93 federation subunits in the state of Iowa.

The measurement models were evaluated on the basis of the degree to which the path analytically derived theoretical models conformed to the theoretical (integrated) model. It was found that assigning the mean of the federation to each subunit of the federation provided the closest fit.

Phillips, G. Howard
Pugh, Albert R.
Ohio State University, Columbus, OH 43210

Selected Health Practices Among Ohio's Rural Residents.
Ohio Agricultural Research and Development Center--
Wooster. Res. Bul. No. 1038. July 1970.

THE OBJECTIVES of this report were: (1) to measure the level of participation in selected health practices by Ohio's rural residents, (2) to compare the level of participation in selected health practices of farm and rural nonfarm residents, and (3) to examine the levels of participation in selected health practices by age, sex, educational attainment, and family size.

Two counties were chosen at random from each of the six Cooperative Extension Service districts in Ohio. These areas had been delineated on the basis of similarity of topography, climatic conditions, and type of farming. Within the twelve counties selected, volunteer interviewers were recruited

through the Extension Service. Each interviewer contacted rural families once every three months during 1967. The interviewers were furnished complete instructions including schedules and instructions. The chi-square test of difference was the exclusive statistical test utilized in the study.

Pugh, Albert R.
Stuckey, W. E.
Phillips, G. Howard
Ohio State University, Columbus, OH 43210

Accidents to Farm and Rural Nonfarm People in Ohio, 1972. Agricultural Research and Development Center--Wooster. Res. Bul. No. 1016. 1974.

THE OBJECTIVES of the accident study were to: (1) determine the incidence of accidents, (2) determine the type of injuries, (3) determine the major things or items involved in the accident, (4) determine changes in the incidence of farm family accidents by type of accident, and (5) compare accident rates of rural nonfarm and farm families.

One county was selected at random from each of the ten Extension Districts of the state. These districts were delineated on the basis of similarity of topography, climatic conditions, and type of farming. Within the ten counties selected, volunteer interviewers were recruited through the Co-operative Extension Service. Each interviewer contacted approximately ten rural families once every three months in 1972. Approximately 250 rural families were interviewed in each county. A master schedule and an accident report form to record the information were used. The Chi-square test of difference was used to determine the accuracy of the sample selected for the study.

Pulver, G.
Iowa State University, Ames, IA 50010

Public Programs Directed Toward Improved Living in Rural Areas. Benefits and Burdens of Rural Development. Iowa State University Press. 1970.

Sarkar, S.
Michigan State University, East Lansing, MI 48824

The Copper Country Medical Industry of Michigan as It Serves Rural People. Unpublished Ph.D. dissertation. Michigan State University. 1969.

Smith, John
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Retirement and Migration in the North Central States: Two Planned Retirement Communities. Pop. Ser. No. 23. Dept. of Rural Sociology. University of Wisconsin. June 1970.

Stuckey, W.E.
Pugh, Albert R.
Ohio State University, Columbus, OH 43210

Accidental Injuries to Ohio Farm People 1957-1972. Ohio Coop. Ext. Serv. Bul. MM 338. Sept. 1973.

THE OBJECTIVES of the accident study were to: (1) determine the incidence of accidents, (2) determine the type of injuries, (3) determine the major things or items involved in the accidents by type of accidents, (4) determine changes in the incidence of farm family accidents by type of accident, and (5) compare accident rates of rural nonfarm and farm families.

One county was selected at random from each of the ten Extension Districts of the state. These districts were delineated on the basis of similarity of topography, climatic condition, and type of farming. Within the ten counties selected, volunteer interviewers were recruited through the Cooperative Extension Service. Each interviewer contacted approximately ten rural families once every three months in 1972. Approximately 250 rural families were interviewed in each county. A master schedule and an accident report form were used to record the information. The Chi-square test of difference was used to determine the accuracy of the sample

selected for the study.

Tweeten, Luther
Oklahoma State University, Stillwater, OK 74074

Push-pull and Schooling Investment. American Journal of Agricultural Economics 50: 1426-1431. Dec. 1968.

Warren, Richard D.
Klonglan, Gerald E.
Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Applications of an Adoption Model to Smoking and Health.
Paper presented at Third World Congress for Rural Sociology. Baton Rouge, LA. 1972.

PAST ADOPTION research has largely focused on adoption of farm practices with increasing emphasis in other areas, notably health. This paper applies the adoption model to the current international health concern of ~~cigarette~~ smoking. Two unique aspects are presented. First, in contrast to most studies of adoption, the data utilized were collected during the process of adoption rather than after the adoption units had all reached adoption stage. This allows the researcher to analyze how close other adoption units may be to an actual adoption decision. The second major uniqueness of the paper is the emphasis on nonadoption of an idea or practice as a type of adoption behavior. The theoretical argument is that the adoption model should also be applicable to nonadoption. The general model considered here involves the stages of awareness, information, evaluation, trial, and adoption.

Data from smoking and health study are applied to an adoption model to evaluate its applicability to the psychological idea adoption that smoking is harmful to health and the adoption behavior of stopping smoking.

Klonglan, Gerald E.
Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Implications of Organizational Administrator and General Public Differences for Instigated Social Action Programs in Smoking and Health. Paper presented at Rural Sociological Society meeting. Baton Rouge, LA. 1972.

IN THIS STUDY the general social change and communication approach is applied to 156 organizational administrators from 35 health-related organizations and 375 randomly sampled respondents from the general public. The data were gathered as part of a larger study on the potential for organizational coordination and on smoking behavior patterns of a random sample. Data for both samples were collected in the same two areas of a nonmetropolitan state in 1969.

The general question asked is: Are there similarities and differences between organizational administrators and the general public on socio-demographic, smoking behavior, attitude, and belief variables? If differences are found to exist, careful study of senders (organizational administrators) and receivers (public) may increase the effectiveness of communication intended to precipitate social action on such issues as cigarette smoking.

Mulford, Charles L.
Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Moderator Effects on Attitude Scale Construction. Home Economics Research Journal (4: June). 1973.

DATA FROM a study on smoking and health are used to examine three methodological questions: (1) Does the method of scale construction influence the items in the resultant scales? (2) Do alternative subgroup delineations influence the formulation of scales? (3) If different scales are formed, what is the influence on measurement criteria, such as reliability, inter-item and item-total correlations, and statistical testing?

Attitude scales were formed for subgroups based on smoking behavior, sex, and area of residence. The subgroups and two methods of selecting items were examined to determine their influence on item selection, measurement criteria, and statistical testing. Both the procedure and subgroups influ-

enced the items included in the scales. Some scales developed by cluster analysis seemed to be more general than the other scales. The items selected were the same for five of the eight subgroups. The other nine scales formed by cluster analysis varied according to the subgroup. This indicates that a moderating effect was operative but may have a differential influence depending on specific subgroups, items, and the scale being considered.

Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Influence of Meaningful Subgroups on Attitude Scales and Programs Directed at Changing Smoking Behavior. Paper presented at Rural Sociological Society meeting. Denver, CO. 1971.

DATA WERE presented from a study concerned with nonmetropolitan respondents' attitudes relating to cigarette smoking behavior. The intercorrelations of 18 attitude scales, developed by theory and a cluster analysis method, were presented for the total sample and for two functional economic areas. Using analysis of variance and the attitude scales, tests were applied to determine if the means for the four smoker behavior categories into which respondents were grouped differed for the total sample, the sample divided according to the functional economic areas, and male and female classification.

The data indicated differences in the relationship of attitudes to smoking behavior dependent upon the use of such alternative subgroups. Differences in attitudes about smoking behavior were also indicated between smokers and non-smokers. The data thus implied that social action programs directed at changing smoking behavior need to consider the geographical area for which the programs are intended and the sex composition and present smoking behavior of the target audience.

Winkelpleck, Judy M.
Iowa State University, Ames, IA 50010

Influence of Alternative Methods of Scale Construction and Meaningful Subgroups on Conclusions About the Rela-

tionship of Attitudes to Smoking Behavior. Unpublished M.S. thesis. Sociology Dept. Iowa State University. 1971.

THE GENERAL objective of this work was to determine if alternative methods of scale construction influenced the conclusions reached about the relationships of attitudes to smoking behavior. Three major parts of the thesis were: (1) a theoretical orientation, (2) description of the study design, and (3) the methodology and findings.

Salient aspects of attitudes and how they have been measured were discussed. Adoption and cognitive dissonance were also discussed as possible theoretical explanations for the relationship of attitudes about smoking to actual cigarette smoking behavior. Data from a nonmetropolitan sample of over 300 male and female adults from two geographical areas (NIAD and MIDCREST) were analyzed. The specific attitude items used were scored by the certainty method.

V. ENVIRONMENT AND NATURAL RESOURCES

AbuKishk, Bakir Abed
Iowa State University, Ames, IA 50010

Efficient Resource Utilization Within a Regional Framework. Unpublished Ph.D. dissertation. Dept. of Economics. Iowa State University. 1973.

THE PURPOSE of this study was to develop a regional plan that would incorporate all the economic activities within the Skunk River Basin in central Iowa. It was designed to contribute to an understanding of the soil erosion problem as related to environmental quality and flood damages, helping public authorities to make sound economic decisions with respect to investment in soil conservation and flood control structures.

Erosion levels and damages that can be produced from an additional unit of production in the agricultural sector were estimated. The costs of erosion control under various alternatives of public sharing were considered. Furthermore, the quantity of water intake and discharge per \$1,000.0 of value added was found for each of the major industry groups that exist in the study region. The results showed the need for joint efforts among different disciplines and among public agencies that are concerned with land and water resources development.

Al-Hassan, S.
Iowa State University, Ames, IA 50010

Peak Flow Determination by Unit Hydrograph Technique for Western Iowa Watersheds. Unpublished M.S. thesis. Dept. of Agricultural Engineering. Iowa State University. 1973.

Benson, Lawrence A.
 Frazee, Charles J.
 South Dakota State University, Brookings, SD 57006

Reflectance Measurements for the Detection and Mapping of Soil Limitations. Remote Sensing Institute in cooperation with Plant Science Dept. South Dakota State University. March 1973.

RESEARCH was conducted on two fallow fields in the proposed Oahe Irrigation Project to investigate the relationship between the tonal variations observed on aerial photographs and the principal soil limitations of the area. A grid sampling procedure was used to collect detailed field data during the 1972 growing season. The field data was compared to imagery collected on May 14, 1971, at 3050 meters altitude.

The imagery and field data were initially evaluated visually. Correlation and regression analysis revealed a highly significant correlation between the digitized color infrared film data and soil properties, such as organic matter content, color, depth to carbonates, bulk density, and reflectivity. Computer classification of the multiemulsion film data resulted in maps delineating the areas containing claypan and erosion limitations.

Interpretation of the results revealed higher surface reflectivity and, therefore, increased film transmittance in the claypan and eroded areas. The research validated the techniques used in the past and provided a basis for the mapping of soil limitations over large areas.

 Frazee, Charles J.
 Myers, Victor I.
 South Dakota State University, Brookings, SD 57006

Land Classification of the Lake Dakota Plain in South Dakota with Remote Sensing Methods. Remote Sensing Institute in cooperation with Plant Science Dept. South Dakota State University. Aug. 1973.

RESEARCH has been conducted to investigate the use of remote sensing data for making land-use decisions in the Lake Dakota Plain of South Dakota. These studies have verified

the feasibility of detecting and mapping the principal soil limitations in the area from aerial photography. This report presents a method which integrates the detection of soil limitations into a land classification system based on photo interpretation.

The technique requires photo interpretation at progressively larger scales and field checking of the photo-derived units. The photo interpretation begins with an analysis of ERTS-1 imagery at 1:1,000,000 scale to determine large physiographic and land-use categories. High-altitude imagery at 1:120,000 scale is used to subdivide the ERTS-derived units based on physiographic aspects and pattern elements. Soils containing specific soil limitations are delineated from either low-altitude photography or enlarged high-altitude photography at 1:20,000 scale.

Application of this technique to a detailed study area located in Spink County, South Dakota, resulted in a classification that should be of value to farmers, resource managers, and land planners. The classification of land units was expanded from both sides of the study area to include a 400 square-kilometer (160 mi²) area. A photo interpretation key was developed to aid in the interpretation of the photography. Individual soil limitations were analyzed on a field basis using large-scale (1:20,000) photography.

Frazee, Charles J.

Waltz, F.A.

South Dakota State University, Brookings, SD 57006

Analysis of Remotely Sensed Data for Detecting Soil Limitations. Conference proceedings, Machine Processing of Remotely Sensed Data. Purdue University. 1973.

DURING 1971 and 1972 a detailed study was conducted on a fallow field in the proposed Oahe Irrigation Project to determine the relationship between the tonal variation observed on aerial photographs and the properties of eroded soil. Correlation and regression analysis of digitized, multiemulsion, color infrared film (2443) data and detailed field data revealed a highly significant correlation between film transmittance and several soil properties indicative of the erosion limitation. Computer classification of the multiemulsion film data resulted in maps portraying the eroded soil and the normal soil. Both correlation and com-

puter classification results were best using the reflectance data from the red spectral band. The results showed film transmittance was actually measuring the reflectivity of the soil surface which was increased by the incorporation of the light-colored, calcareous parent material exposed by erosion or tillage on soils with thin surface horizons.

Bronstein, Daniel A.
Erickson, Donald E.
Michigan State University, East Lansing, MI 48824

Zoning Amendments in Michigan. Journal of Urban Law 50: 729-749. May 1973.

THIS ARTICLE includes a detailed study of zoning amendments in six Michigan counties (Antrim, Benzie, Iosco, Mason, Oakland, and Roscommon), showing that there is no stability to zoning in Michigan. In the unincorporated areas, 80 percent of the rezonings requested were granted; in the City of Troy, used for comparison, the rate was still over 50 percent. This demonstrated that traditional zoning, as done in Michigan, is incapable of controlling and directing land use. A detailed analysis of two recent case law developments regarding zoning amendments in Michigan, and recommendations on whether they should be followed in the future, are included.

Bultena, Gordon L.
Rogers, David L.
Iowa State University, Ames, IA 50010

Considerations in Determining the Public Interest.
Journal of Soil and Water Conservation 29(4): 168-173.

PUBLIC OPINION polling provides one means of determining the public interest in proposed environmental projects. Examination was made of citizens' opinions toward a reservoir proposed by the Army Corps of Engineers. Social and economic factors important to the differing opinions toward this project were assessed. The public opinion data suggested a different conclusion about the public interest in this project than would be drawn from the benefit-cost ratio or from political commitments. The perceived personal and collective costs of the reservoir were revealed to be the most important

of the several factors that affected respondents' opinions.

 Rogers, David L.
 Webb, Vince
 Iowa State University, Ames, IA 50010

Public Response to Planned Environmental Change: A Study of Citizen Views and Actions on the Proposed Ames Reservoir. Dept. of Sociology Rpt. 10. Iowa State University. Jan. 1973.

THE GENERAL purpose of this study was to determine if the Ames Reservoir is in the public interest, as revealed through the attitudes of local citizens about the desirability of building the reservoir. Data in the study were obtained in 390 interviews with a representative sample of persons residing in three counties. Approximately one-half of the respondents indicated they had formed an opinion about the project. The remainder either were uninformed or had no opinion. A larger number of respondents opposed the reservoir than favored its development. Those who held favorable and unfavorable attitudes toward the reservoir did not differ in their age, sex, income, education, or occupational characteristics, but did differ depending upon whether they lived upstream or downstream from the proposed dam. Of the several alternative development plans being considered for the river valley, a greenbelt park had the most appeal. We found that recreational benefits ranked as a major factor in the public's assessment of the desirability of the project.

Campbell, Kenneth L.
 Iowa State University, Ames, IA 50010

Effects of Stream Straightening on Flood Runoff Characteristics. Unpublished M.S. thesis. Iowa State University. 1970.

 Iowa State University, Ames, IA 50010

Hydrologic Simulation of Depressional Watersheds. Unpublished Ph.D. dissertation. Iowa State University.

1972.

Kumar, Surrendra
 Johnson, Howard P.
 State University, Ames, IA 50010

Stream Straightening Effects on Flood-Runoff Characteristics. Transactions, American Society of Agricultural Engineers 15: 94-98. 1972.

THE EFFECTS of stream straightening and diking on river flow characteristics were determined for the Boyer River in western Iowa. Two flood routing methods, the kinematic and convex methods, were used to obtain discharge hydrographs at several locations along the stream. After straightening, the peak discharge was increased 90 to 190 percent. The flood wave travel time was reduced 60 to 70 percent after straightening. An unmodified reach in the straightened river has a strong damping effect on the flood wave from a straightened section of the river, thus greatly reducing the peak floods.

Center for Agricultural and Rural Development
 Iowa State University, Ames, IA 50010

Land Use Planning Seminar Proceedings: Focus on Iowa.
 Center for Agricultural and Rural Development. 1973.

Cipra, J.E.
 Baumgardner, M.F.
 Stoner, E.R.
 MacDonald, R.B.
 Purdue University, West Lafayette, IN 47907

Measuring Radiance Characteristics of Soil with a Field Spectroradiometer. Proceedings, Soil Science Society of America 35: 1014-1017. 1971.

A FIELD spectroradiometer was used to measure radiation from samples of seven Indiana soil series in a spectral range from 430 to 730 nanometers (nm). This range includes most of the visible portion of the spectrum. Percent reflectance of

the soils was calculated as the ratio of the radiation of the target soil divided by the incident radiation. Reflectance curves were obtained for the soils in both wet and dry conditions with the crust broken and for some of the soils in a dry crusted condition. Preliminary results obtained during evaluation of the instrument indicated a capability for characterizing the radiance properties of various soil series.

 Franzmeier, D.P.
 Steinhardt, G.C.
 Purdue University, West Lafayette, IN 47907

Mapping of Soil Characteristics by Computer Analysis of ERTS MSS Imagery. Agronomy Abstracts. p. 112. 1973.

IMAGES from the Earth Resources Technology Satellite (ERTS) were analyzed to determine their usefulness as a source of significant new information on certain soil and landscape characteristics of interest. Two counties in western Indiana were studied, using computer-aided analysis of multispectral scanner (MSS) data and correction of geometric distortions, for data collected in November and May. Comparisons were made of conventionally mapped soil association boundaries and ERTS images. In addition, high-altitude color infrared photography was used to interpret soil characteristics distinguishable on the ERTS imagery. Boundaries between some contrasting soil associations as conventionally mapped were readily apparent on ERTS imagery. Additional boundaries could be distinguished on ERTS imagery when soil association maps were used for reference. Although some apparent discrepancies were found, ERTS imagery, because it gives an overall view of the soil landscape, is a useful new tool to assist in making general soil maps.

DeBoer, Darrell W.
 Iowa State University, Ames, IA 50010

Flood Hydrology of Watersheds with Depressional Storage. Unpublished Ph.D. dissertation. Dept. of Agricultural Engineering. Iowa State University. 1969.

 Johnson, Howard P.
 Iowa State University, Ames, IA 50010

Simulation of Runoff from Depression Characterized Watersheds. Transactions, American Society of Agricultural Engineers 14: 615-620. 1971.

THE MATHEMATICAL watershed model for the most recently glaciated region of Iowa was further developed. The revised model used precipitation as input and simulated the hydrologic watershed processes of infiltration, surface runoff to depression areas, soil moisture profile storage, evapotranspiration, and percolation of water to the water table. The model contains four elemental watershed options: (1) no drains, (2) subsurface drains only, (3) surface-inlet drains only, and (4) a combination of surface-inlet and subsurface drains. Actual runoff events were compared with the computer output for the model.

 Ritter, William F.
 Iowa State University, Ames, IA 50010

Flood Damage to Crops in Depression Areas of North Central Iowa. Transactions, American Society of Agricultural Engineers 13: 547-549, 553. 1970.

EXCESS surface depression water in the East Fork Hardin Creek Watershed caused 12 percent corn and 9 percent soybean watershed crop losses in 1967. The average corn and soybean yields for partly damaged crop areas were 57 and 71 percent of undamaged crop areas. No significant difference between the oil and protein content of the partly damaged and undamaged soybeans was found. Four days of inundation in 1966 and 1967 killed 12-inch tall corn. Soybeans flooded for three days about 20 days after emergence were killed.

Fenton, Thomas E.
 Iowa State University, Ames, IA 50010

Soil Productivity Ratings and Their Use in Agricultural Land Evaluation. Proceedings of the 28th Annual Meeting, Soil Conservation Society of America. (Forthcoming.)

EQUITABLE assessment of agricultural land has been a major problem for assessors for many years. Even in the smallest Iowa counties, the assessor must place values on approximately 7,000 tracts of land. An interpretation now provided as a part of the soil survey in Iowa is a system of rating soils to aid in agricultural land valuation and assessment. Each soil mapping unit is assigned a corn suitability rating, and the ratings provide an index for comparing all soil mapping units in the state. An individual corn suitability rating for a soil mapping unit reflects the integrated effect of numerous factors that influence the yield potential and use of the soil for row crop (corn and soybeans) production at a specified management level.

An average productivity rating is calculated for each tract of land to be evaluated. This procedure provides a means to compare and transfer economic data obtained from other studies to similar quality tracts of land throughout the county or state.

Iowa State University, Ames, IA 50010

Soil Surveys and a Land Analysis System. In Land Use Planning Seminar: Focus on Iowa. pp. 75-88. Center for Agricultural and Rural Development. Iowa State University. 1973.

SOIL AND landscape characteristics exert a strong influence on the manner in which man uses land. Historically, however, study of soils has been related to their use for agriculture and forestry with little attention given to the way in which knowledge of soils may be applied to other uses of land. Increased awareness of the significance of natural soil variation has stimulated the use of applied soil science in decisions related to a variety of other land uses that are not necessarily directly related to agriculture and forestry. This paper discusses the types of soil survey information that are useful in a land analysis system.

 Duncan, E.R.
 Shrader, W.D.
 Dumenil, L.C.
 Iowa State University, Ames, IA 50010

Productivity Levels of Some Iowa Soils. Iowa Agr. and Home Econ. Exp. Sta. and Coop. Ext. Serv. Spec. Rpt. No. 66. April 1971.

THIS REPORT presents crop yield estimates for corn, soybeans, oats, and hay on 290 selected soil types and phases. These yield estimates are believed attainable as a five-year average with the technology available in 1971 and average weather conditions.

The yield estimates are one important interpretation of the soil survey program in Iowa. An additional interpretation is a system of rating soils based on their suitability for corn production. These interpretations can be used as aids in production planning, determining land prices, and the equitable assessment of agricultural land.

 Faxlanger, David
 Beavers, G.H.
 Iowa State University, Ames, IA 50010

Soil Surveys and a Computerized Land-Use Analysis System. Agronomy Abstracts. American Society of Agronomy. 1973 Annual Meeting. (Forthcoming.)

SOIL SURVEY information has been utilized by land-use planners but generally has not been efficiently integrated with other available data, especially additional natural resource data. Methods of presentation of the data have been time consuming. The system developed is designed to allow input data relative to land use to be weighted according to their importance and reliability. Integration of all available data is possible. Output of the data in either tabular or map form is possible. Selected data and problems are used to explain the system.

 Hole, F.D.
 Odell, R.T.
 Westin, F.C.
 Iowa State University, Ames, IA 50010

Soil Yield Potential. Crops and Soils. pp. 7-10.
 American Society of Agronomy. Feb. 1970.

THE YIELD estimates of selected soils of the North Central Region are updated from those published in 1965 in NCR Publication No. 166. Factors affecting fertility and productivity of soils in the region are discussed.

Finke, Jeffrey
 University of Illinois, Urbana, IL 61801

Nitrogen Fertilizer: Price Levels and Sales in Illinois, 1945-1971. Illinois Agricultural Economics 13(1): 34-40. Jan. 1973.

AN AGGREGATE Illinois price level for nitrogen is calculated for 1945-71 utilizing annual quantity weights of different types of nitrogen fertilizer. Incomplete data do not allow an exact estimate but do present an adequate portrait of the secular trends. Several reasons are advanced to explain the sixfold increase in quantity sold and the simultaneous halving of the cost of nitrogen since 1960.

 Swanson, E.R.
 University of Illinois, Urbana, IL 61801

Diversification in Illinois Crop Production: 1938-1970. Illinois Agricultural Economics 13(1): 8-11. Jan. 1973.

THE TRENDS in crop diversity in the nine crop-reporting districts of Illinois are measured with a diversity index based on information theory. Differences among districts in

these trends are noted. The factors underlying the increasing importance of corn and soybeans are enumerated. The issues of the effect of increased specialization on income risk and potential environmental quality consequences are noted.

Fortney, Charles T.
South Dakota State University, Brookings, SD 57006

Attitudes of Farm Operators in Four South Dakota Counties Toward the Conservation of a Natural Resource.
Dept. of Rural Sociology. South Dakota State University. 1970.

Dimit, Robert M.
Field, Donald R.
Sauer, Howard M.
South Dakota State University, Brookings, SD 57006

Attitudes of South Dakota Farm Operators Toward Wetlands and Waterfowl Production. Agr. Exp. Sta. Bul. 592.
Dept. of Rural Sociology. South Dakota State University. Jan. 1972.

THIS STUDY deals with attitudes of farm operators toward particular wetlands related programs and the relationship of selected socioeconomic factors to these attitudes. The farm operators interviewed in the study reside in four South Dakota counties located in the North American Pothole Region.

The size of farm operation was inversely associated with favorableness of attitudes toward wetlands. Operators of smaller farms possessed more favorable attitudes than operators of the large farms. Farm operators having 5 percent or less and those with more than 10 percent of their land in wetlands appear to offer the greatest number of potential participants for wetlands programs. The type of recreational hunting by the farm operators is related to their attitude toward wetlands programs. Duck hunters were most favorable to wetlands programs, with goose hunters being somewhat favorable and the deer and upland game bird hunter being least favorable.

Those with less than 5 percent and more than 10 percent of their property in wetlands indicated the highest rate of favorable attitudes toward waterfowl programs.

Favorableness of attitudes toward drainage programs was not related to the composition of farmland variables-- property in native hay or pasture and property under cultivation. Reference groups were not significantly related to attitudes toward drainage.

Frazer, C.J.

Carey, R.L.

Westin, F.C.

South Dakota State University, Brookings, SD 57006, and Branch of Land Operations, Bureau of Indian Affairs, Aberdeen, SD 57401

Utilizing Remote Sensing Data for Land Use Decisions for Indian Lands in South Dakota. Proceedings, eighth international symposium, Remote Sensing of Environment. 2-6 Oct. 1972. Willow Run Laboratories. Environmental Research Institute of Michigan. Ann Arbor.

RESEARCH was initiated on the Pine Ridge Reservation in southwestern South Dakota to determine the usefulness of remote sensing techniques for making, updating, and revising soil and range inventories. Photographic and thermal-infrared imagery were acquired at an altitude of 11,500 feet above the ground level on October 15, 1970, June 30, 1971, and August 2, 1971. A density slicing system was used by experienced soil and range scientists to enhance film optical density differences associated with range sites and soils. Prints enlarged from 35 mm slides of the density slicing analyses were used in the field to compare soil and range boundaries, as delineated by density slicing, to actual soil and range conditions.

Examples of interpretive groupings of soil and range inventory data for uses which currently are of interest to resource managers on the reservations in South Dakota are shown. The soil units were rated according to their suitability for cropland, recreational development, and irrigation. Range sites were used to determine land value, potential grass production, and suitability for range improvement practices.

Gropper, J.L.
Westin, F.C.
South Dakota State University, Brookings, SD 57006

Remote Sensing of Physiographic Soil Units of Bennett County, South Dakota. Remote Sensing Institute in cooperation with Plant Science Dept. South Dakota State University. Feb. 1973.

A STUDY was conducted in Bennett County to establish a rangeland test site for evaluating the usefulness of ERTS data for mapping soil resources in rangeland areas. Photographic imagery obtained in October 1970 was analyzed to determine which type of imagery is best for mapping drainage and land-use patterns.

Imagery of scales ranging from 1:1M to 1:20,000 was used to delineate soil-vegetative physiographic units. The photo characteristics used to define physiographic units were texture, drainage pattern, tone pattern, land-use pattern, and tone. These units will be used as test data for evaluating ERTS data.

The physiographic units were categorized into a land classification system. The various categories which were delineated at the different scales of imagery were designed to be useful for different levels of land-use planning. The land systems are adequate only for planning of large areas for general uses. The lowest category separated was the facet. The facets have a definite soil composition and represent different soil landscapes. These units are thought to be useful for providing natural resource information needed for local planning.

Glover, T.F.
Ohio State University, Columbus, OH 43210

Limitations of Dynamic Programming in Water System Planning and the Use of DDDP and GP, The. Dept. of Agricultural Economics and Rural Sociology Occasional Paper No. 77. April 1972.

THE PURPOSE of this paper is to briefly review dynamic programming (DP)--its use and limitations in water system planning--and to suggest two alternative approaches for solving multistage problems by discrete differential dynamic programming (DDDP) and geometric programming (GP). The main limitation of dynamic programming is that of computational time involved when several planning alternatives are derived and compared. The basic multi-stage planning technique of dynamic programming is preserved in both the DDDP and GP procedures. However, the severe computational problems of DP become modified with the use of the latter two procedures. Nonlinearities and stochastic disturbances may also be incorporated in DDDP as well as GP if each stage is decomposed to a given domain of the appropriate probability density.

Ohio State University, Columbus, OH 43210

On National vs. Local Pollution Control. Dept. of Agricultural Economics and Rural Sociology Occasional Paper No. 74. May 1972.

THE REPORT of the President's Council of Economic Advisors for 1971 suggested that public policy directed to environmental quality control be left to local jurisdiction and decentralized decision making. By a simple graphical analysis, without implying a vested interest in the CEA analysis or decentralization, this author concludes that: (1) national pollution price setting is not a requirement for a Pareto optimum and may not be so even in the long run; (2) decentralized control is not inconsistent with the attainment of efficient pollution prices so long as each locality maximizes its own net benefits; (3) the real issue of national vs. local control is whether national or local control will yield more accurate information about pollution damages and benefits; (4) local control creates monopsony power for firms while national control converts that power to a national monopoly power.

Ohio State University, Columbus, OH 43210

Two Stream Pollution Control Models. Dept. of Agricultural

tural Economics and Rural Sociology Occasional Paper No. 151. May 1972.

TWO POLLUTION control models are derived in this paper using optimal control theory and applied to stream pollution control policy by abatement expenditures and choice of production technique. The implications of such policy are given and, further, the extreme policies of complete abolition of pollutants versus ignoring the problem are analyzed. The stock and flow properties of pollutants in relation to stream pollution and control are also discussed.

Johnson, Howard P.
Iowa State University, Ames, IA 50010

Hydraulic Model of Runoff from Depressional Areas: Part I. Transactions, American Society of Agricultural Engineers 11: 364-367. 1968.

A MATHEMATICAL model designed to portray the hydraulics of runoff from depressional areas in north central Iowa was developed. Tests with the model show that it is a valid method for studying runoff from the depressional areas of north central Iowa and for investigating the effect of subsurface drainage on peak flow. The model makes possible comprehensive study and planning of drainage facilities in depressional topography on a watershed scale.

Johnson, Howard P.
Iowa State University, Ames, IA 50010

Hydraulic Model of Runoff from Depressional Areas: Part II. Transactions, American Society of Agricultural Engineers 11: 368-373. 1968.

THIS PAPER, the second on the development of a mathematical model of runoff from depressional areas, defines the components of the model. The model is composed of several components, each being based on a rational analysis of the process that the component represents. Tests of the model show that it is a valid method for studying runoff from such

areas and for investigating the effect of subsurface drainage on peak flows.

Hermanson, Ronald E.
Johnson, Howard P.
Iowa State University, Ames, IA 50010

Generalized Flood-Frequency Relationships. Iowa State Journal of Science 41: 247-268. 1967.

STUDY OF flood discharge records of about one-third of Iowa indicates that flood flows in the region are distributed in reasonable accord with the log normal distribution. This distribution was rejected, however, for seven of the 33 gaging stations studied. The mean annual flood can be evaluated from drainage area and the logarithmic standard deviation from the stream slope.

Hoffman, Clayton O.
North Dakota State University, Fargo, ND 58102

North Dakota's First Water District. Unpublished M.S. thesis. Dept. of Agricultural Economics. North Dakota State University. 1973.

Holt, Robert F.
Johnson, Howard P.
McDowell, L.L.
Iowa State University, Ames, IA 50010

Surface Water Quality. Proceedings, National Conservation Tillage Conference. pp. 141-156. Soil Conservation Society of America. Des Moines, IA. 1973.

THE INFLUENCE of conservation tillage practices on the quality of surface water depends upon the extent the sediment load is reduced and the extent that the pathway for water movement within the watershed is altered from overland surface flow to subsurface return flow. Keeping organic surface soil in place aids in more effective control of fertilizer, animal wastes, and pesticide additions. Quantitative data relating conservation practices and amounts of sed-

iment, nutrients, and pesticides in runoff are presented.

Johnson, Howard P.
Iowa State University, Ames, IA 50010

Hydrologic and Watershed Modeling--A Summary. Transactions, American Society of Agricultural Engineers 16: 585-586. 1973.

MODELING of natural, economic, and social systems should be of assistance in planning, provided that the expertise, financial support, and research environment are available. Several reasons may be presented for using models in research. A model provides a frame of reference for considering a problem, brings attention to information gaps, aids in understanding of the processes being modeled, provides ease in manipulation of components, and offers an inexpensive way to predict.

Iowa State University, Ames, IA 50010

Engineering Studies of Land Characteristics Applicable to Land Use Planning and Control. Land use planning seminar, Focus on Iowa. pp. 163-177. Center for Agricultural and Rural Development. Iowa State University. 1973.

KNOWLEDGE of the physical aspects of a resource and how it interacts with economic institutional aspects is needed for land-use planning and control. We are increasingly able to describe quantitatively the effect of land use on the quality, quantity, and flow rate of water that flows from the land. Some natural processes are not well understood, mainly those of sediment delivery and chemical transport. Adequate consideration in planning of the agricultural land resource use and the water-sediment-nutrient-pesticide transport mechanisms related thereto will become increasingly important.

Holdenhauer, William C.
Iowa State University, Ames, IA 50010

Pollution by Sediment: Sources and the Detachment and Transport Processes. In T.L. Willrich and G.E. Smith, eds., Agricultural Practices and Water Quality. pp. 3-20. Iowa State University Press. 1970.

THIS CHAPTER of the book relates the physical aspects of sedimentation as they relate to pollution of the agricultural environment. Erosion and sediment transport as related to various regions are discussed. The works of man, primarily related to change of cover and alteration of the hydraulic system through which sediment is transported, are reviewed.

Palmer, David B.
Iowa State University, Ames, IA 50010

Physical Relationships with the Agricultural Sector.
Ames Reservoir Environmental Study, Appendix 4. Iowa State University Water Resources Research Institute. 1973.

THIS WORK contains the results of studies of the agricultural influence on the proposed Ames Reservoir. Faculty and graduate students in agricultural engineering, agronomy, and civil engineering cooperated in the effort. Chapters relating to (1) agricultural land-use patterns, (2) water quality implications of cropland nutrients, (3) water quality implications of pesticides, (4) water quality implications of livestock production, (5) reservoir sedimentation, (6) the use of statistical distributions for determining the magnitude and frequency of floods, (7) water control on agricultural land, and (8) alternative land and water management programs were developed.

Saxton, Keith E.
DeBoer, Darrell W.
Iowa State University, Ames, IA 50010

The Effect of Man on Water Yield, Peak Runoff and Sedimentation. Proceedings, Iowa Academy of Science 76: 153-166. 1969.

MAN CAN alter several facets of the hydrologic cycle appreciably. Those facets most easily altered are related to vegetative cover and surface geometry either on the land or in the drainage system. This paper attempts to define evidence of changes and to comment on our present understanding of the extent of changes.

Kristof, S.J.
Zachary, A.L.
Purdue University, Lafayette, IN 47907

Mapping Soil Types from Multispectral Scanner Data.
Proceedings, 7th International Symposium, Remote Sensing of Environment. 1971. pp. 2095-2108.

"MAPPING" of soil types using multispectral scanner data and computer implemented pattern recognition techniques was partially successful. Soil series are conventionally differentiated by surface and subsurface properties, so that they cannot be expected to have observable surface differences in all cases. Some difficulty was encountered when attempting to "map" a soil series (or soil type) in one soil test area using training samples from another soil test area located at a distance of several km from the first. These difficulties could have been due to differences in illumination at the two soil test areas; differences in surface roughness, surface texture, or surface color; adjustments in instrumentation during data collection; or other factors. Since any given soil series has, by definition, an allowable range of surface conditions, it is inevitable that some spectral variations will occur within a soil series. The best identification and discrimination of soil series seemed to result when these variations within soil series were much smaller than variations between soil series. In some instances, the spectral variations within series were greater than between series.

Land-Use Analysis Laboratory
Iowa State University, Ames, IA 50010

A Land Classification Method for Land Use Planning. Report prepared for Office for Planning and Programming.
Des Moines, Iowa. 1973.

THIS STUDY provides information pertinent to the land planning effort. Included are the following items: 1) a prototype natural land classification method, 2) a prototype information system for application by planning-oriented decision makers, and 3) a prototype analysis system for application to specific questions in planning. The potential of the system is discussed.

Melvin, S.W.
Iowa State University, Ames, IA 50010

Comparison of Predicted and Observed Storm Runoff Volumes from Agricultural Watersheds. Unpublished M.S. thesis. Iowa State University. 1967.

Iowa State University, Ames, IA 50010

Determination of Deep Percolation Losses in Loessiel Soils. Unpublished Ph.D. dissertation. Iowa State University. 1970.

Johnson, Howard P.
Beer, Craig E.
Iowa State University, Ames, IA 50010

Predicting Surface Runoff from Agricultural Watersheds. Transactions, American Society of Agricultural Engineers 14: 505-507, 510. 1971.

A SIMPLE infiltration model was used to predict runoff from mixed cover agricultural watersheds located in a deep loess soil region. Surface runoff predictions were made for 100 storm watershed combinations. Runoff was computed as a function of storm precipitation, soil moisture, percent of watershed in row crop, and Horton's infiltration equation.

Moore, C.L.
 Swanson, E.R.
 Seitz, W.D.
 University of Illinois, Urbana, IL 61801

Economic Evaluation of Alternative Farm Water Sources in the Claypan Area of Illinois. Water Resources Center Res. Rpt. No. 62. 83 pp. Feb. 1973.

THE CLAYPAN area of Illinois is characterized by unreliable water supplies. In addition, water quality problems have recently been recognized in the form of widespread nitrate and coliform contamination of water in private wells in Washington County. A ten square-mile area in this county was selected for study. The nature of present water supplies was described, and the costs of six alternative supply systems were estimated: (1) present on-farm sources, (2) treatment of pond water, (3) combination of present on-farm sources plus hauling, (4) hauling all water, (5) purchasing all water from nearby municipality via pipeline, and (6) combination pipeline plus present on-farm sources. The six alternatives were examined in terms of the net present value of costs associated with each alternative, considering an 40-year planning period.

Although the present sources proved to be the least costly, they are unsatisfactory for reasons of health and reliability. Treatment of pond water was the least-cost source of meeting the quality requirements for water for the total area. However, the reliability of this source and questions of personal preference against drinking pond water may indicate a preference among some users for connection with a municipal system, which is somewhat more expensive.

Moore, James L.
 University of Wisconsin, Madison, WI 53706

A Model for Determining the Effects of Policy Alternatives on Land Development: Some Specific Issues in the Model Development. Dept. of Agricultural Economics. University of Wisconsin. (Forthcoming.)

A SIMULATION methodology which uses a linked system of decision models to predict the effects of policy decisions on land development may be more accurate than existing methodologies. It allows modeling of principal decision makers, allows experimentation with the effects of changing policy.

variables on land development, allows study of the effects of new forms of land development, does not require that decision making is rational, and the technique is relatively inexpensive.

Two of the possible submodels used in the gaming simulation are the household and the residential developer. Time lags can be included directly in the model system using the gaming techniques with a simulated environment. There is a general consensus now that gaming models produce results as valid as any other existing models, are less costly, and hold more promise for the future application than existing alternatives in costly simulation.

Beer, Craig E.

Iowa State University, Ames, IA 50010

Yield Reduction by Controlled Flooding of Corn. Transactions, American Society of Agricultural Engineers 12: 46-47, 50. 1969.

AN EXPERIMENT was conducted to evaluate flood damages to corn that was inundated for variable periods of time at different stages of growth. Two nitrogen levels were included. The effects of flooding were measured in terms of yield variations. The corn plots were most affected by flooding at the early stages of growth.

Saxton, K.E.

Iowa State University, Ames, IA 50010

Watershed Evapotranspiration by the Combination Method. Unpublished Ph.D. dissertation. Iowa State University. Ames. 1972.

Schellenberg, Herbert D.

Iowa State University, Ames, IA 50010

Identification, Measurement, and Incorporation of Environmental Quality Objectives in Natural Resource Development. Unpublished Ph.D. dissertation. Dept. of Economics. Iowa State University. 1973.

THE MAJOR purpose of this dissertation was to develop and test a methodological framework to incorporate environmental quality objectives into natural resource development by construction of reservoirs. Criteria for economic performance were developed which would include nonpriced aesthetic and amenity values (termed amenity services) from natural resources, such as forest, streams, and remnants of native prairie, that would otherwise be inundated.

Two criteria for measuring economic performance were chosen for empirical application. One, termed the maximum GNP criterion, attempted to quantify monetarily amenity services so that benefit-cost analysis could be employed to evaluate the feasibility of a green-belt park system. The second, termed the productivity criterion, sought to identify the production possibility frontier for the two social outputs of environmental quality (level of amenity services) and economic development (net benefits from benefit-cost analysis).

A survey of 294 households in central Iowa was used to obtain information to apply the above two economic criteria to the Ames Reservoir, a proposed multiple-purpose Corps of Engineers project to be located on the Skunk River near Ames, Iowa. Of the three projects considered in this study, only the green-belt part system was shown to meet favorably the two criteria of economic performance. The study showed that preservation of wildlife and forest at the reservoir sites was strongly important.

Soil Survey Staff
Purdue University, Lafayette, IN 47907, and
USDA Soil Conservation Service, Suite 2200,
5610 Crawfordsville Rd, Indianapolis, IN 46224

General Soil Maps for the Counties of Indiana. Purdue University Coop. Ext. Ser. Bul. AY-50 (1-92). 1971.

THIS SERIES consists of one map for each of the 92 counties in Indiana. Each map is at a scale of 1:190,000 (3 mi. = 1 inch) and shows soil associations. There are 110 associations in the state, and each county has around 4 to 12 of them. The following kinds of information have been entered into computer storage: (1) composition of soil associations in terms of soil series, steepness of slope, and degree of

erosion, (2) morphological, chemical, and physical properties of soil series, (3) yield potential of soils, and (4) criteria to relate soil properties of their suitability for a number of uses. This information can be used to develop interpretations of the general soil maps, and also of detailed maps, for yield potentials of soil areas (useful in identifying prime agricultural land and for land evaluation), power requirements for tillage, suitability of soils for home sites, and for other uses of soils.

This information is available to users as computer printouts. Some will be published, but the volume of data prohibits publishing all of it. Users are primarily planners, tax assessors, land developers, and agricultural advisors.

Steinhardt, G.C.
 Franzmeier, D.P.
 Cipra, J.E.
 Purdue University, Lafayette, IN 47907

Comparison of Indiana Soil Associations and Earth Resources Technology Satellite Imagery. Agronomy Abstracts. p. 118. 1973.

THE MULTISPECTRAL scanner on board the Earth Resources Technology Satellite (ERTS) sends back data giving the intensity of radiation reflected from the earth's surface for various wavelengths in the visible and infrared portions of the spectrum. These data are recorded on magnetic tapes which can be used for producing black and white photographs and images on a display screen resembling a TV receiver. Interpretation in a manner similar to that used for aerial photographs of the photographic imagery made from a single wavelength band showed that some soil associations grouped by physiographic position could be consistently separated. False color imagery was produced by multiple exposure of color film through various filters to images in several wavelength bands displayed in black and white on the digital display screen. Compared with black and white imagery, this technique gives sharper detail and allows separation of more soil-land use systems.

Swanson, Earl R.
 Taylor, C.R.

Welch, L.F.
University of Illinois, Urbana, IL 61801

Economically Optimal Levels of Nitrogen Fertilizer for Corn: An Analysis Based on Experimental Data, 1966-1971. Illinois Agricultural Economics 13(2): 16-25. July 1973.

RESPONSE functions are estimated which relate corn yield to nitrogen fertilizer and, in some cases, time of application of fertilizer and carrier. The experiments were conducted at eight different locations in Illinois. Response functions for each year at each location are estimated. Economically optimal rates under conditions of being able to forecast the season and with the average price ratios experienced during the five years (1967-1971) ranged from 100 pounds per acre at Brownstown to 290 pounds per acre at DeKalb. The optimal rates appear to be rather insensitive to wide changes in the corn/N price ratio. Three game-theoretic decision models are used to estimate optimal rates for each location under conditions in which the producer cannot predict the season. At three locations all three models indicated an optimal rate of 200 pounds or more. The range in optimal rates considering all locations and all models is from 100 pounds to 240 pounds per acre.

Taylor, C. Robert
University of Illinois, Urbana, IL 61801

An Analysis of Nitrate Concentrations in Illinois Streams. Illinois Agricultural Economics 13(1): 12-19. Jan. 1973.

THE INFLUENCE of inputs to agricultural production on nitrate concentration in water supplies is of crucial importance for economic analysis of nitrogen policies. This paper presents the results of three regression analyses of the relationship between nitrate concentration in streams, the acreages of principal crops, and fertilizer sales for some Illinois watersheds. Inadequacies of the secondary data used in the analyses are noted, and suggestions for future research are outlined.

 Swanson, Earl R,
 University of Illinois, Urbana, IL 61801

Experimental Nitrogen Response Functions, Actual Farm Experience and Policy Analysis. Illinois Agricultural Economics 13(2): 26-32. July 1973.

AN ASSESSMENT was made of how well results of experiments with nitrogen fertilizer on corn apply under farm conditions in Illinois. This assessment was based on a comparison of experimental response functions with results of a survey of yields. Estimates of differences among farmers in the application rates were used to make the comparisons. A similar assessment was made which compares experimental results with some response functions developed by the USDA that were based on judgments of agronomists familiar with experimental data and farm practices. The consequences of a limitation on fertilizer use in the form of restricted application rates depend on the rate distribution before and after the restriction. Therefore, it is important to take into account changes in the distribution of rates which may occur under regulation. The change in average per acre corn yield resulting from various nitrogen fertilizer restrictions is calculated for eight regions in Illinois.

Wenner, K.A.
 Dideriksen, R.I.
 Purdue University, Lafayette, IN 47907

A Computer Method for Interpretation of Soils Data for Land Use Decisions and Tax Assessment. AGRONOMY Abstracts. p. 174. 1972.

AUTOMATIC data processing, storage, retrieval, and analysis techniques can be utilized as an aid in the interpretation and use of soil survey information for land use planning and evaluation of agricultural lands. The evaluation can be utilized for taxing purposes and is based on productivity indexes (PI) for Indiana soils. The PI is defined as the gross value per acre of corn and (or) equivalent crops minus the sum of the cost of the cropping system (excluding land costs, taxes, and return on investment) and the conservation practices needed for the system.

A portion of a soil survey map was divided by a row-column grid system creating 256 cells per section (640

acres). The major soil type for each cell was entered into the computing system along with data for 31 soil characteristics plus the PI for each soil type. From this one basic data source, the interpretation for alternative land uses were generated by use of computer programs. These interpretations were then projected in map or table form for use by land use planners, realtors, or developers. This same data source was then utilized to spatially orient the PI values for use by tax assessors.

Westin, Frederick C.
South Dakota State University, Brookings, SD 57006

ERTS Image of South Dakota and Soil Association Value Areas. South Dakota Agr. Exp. Sta. Info. Ser. No. 5. Nov. 1973, and Remote Sensing Institute 73-17.

THREE groups cooperated to prepare this map: (1) soil survey researchers from the South Dakota State University Agricultural Experiment Station and the USDA Soil Conservation Service, which prepared the Soil Association separations; (2) the Directors of Assessment and the South Dakota Department of Revenue officers who compiled the land sales of unimproved agricultural land by Soil Associations; and (3) the South Dakota State University Remote Sensing Institute and the National Aeronautic and Space Administration contract No. NASA-ERTS NAS5-21774, which furnished and prepared the ERTS Base Map from satellite imagery upon which Soil Association Value Areas are drafted.

South Dakota State University, Brookings, SD 57006

ERTS-1 MSS Imagery: A Tool for Identifying Soil Associations. COSPAR A.5.3. Plant Science Dept. and Remote Sensing Institute. South Dakota State University. 1974.

SOIL ASSOCIATION maps show the spatial relationships of land units developed in unique climatic, geologic, and topographic environments and having characteristic slopes, soil depths, textures, available water capacities, permeabilities, and the like. From these characteristics of the soil, broad interpretations can be made, such as how the soil is suited

for various agronomic and engineering uses. ERTS-1 imagery was found to be a useful tool in the identification of soil associations, since it provides a synoptic view of an 8 million-acre scene, which is large enough so that the effect can be seen on soils of climate, topography, and geology. A regional view also allows soil associations to be observed over most, if not all, of their extent. This aids in selecting typical sampling sites and provides a check on the homogeneity of the associations. ERTS-1 MSS imagery also provides four spectral bands taken every 18 days which give data on relief, hydrology, and vegetation, all of which bear on the delineation and interpretation of soil associations.

 South Dakota State University, Brookings, SD 57006

ERTS-1 MSS Imagery: Its Use in Delineating Soil Associations and as a Base Map for Publishing Soils Information. To be published by N.A.S.A.--Goddard Space Flight Center. Mimeo available. Presented at third ERTS Symposium. Washington, D.C. Dec. 10-14, 1973.

ERTS 1 imagery is a useful tool in the identification and refinement of soil association areas and an excellent base map upon which soil association information can be published. Prints of bands 5 and 7 were found to be most useful to help delineate major soil and vegetation areas. Over 4,800 land sale prices covering 1967-72 were located in the soil areas and averaged. A legend explaining land use, dominant slope, and soil parent materials of each delineated area was developed. The soil associations then were described as Soil Association Value Areas and published on a 1:1,000,000 scale ERTS mosaic of South Dakota constructed using negative prints of band 7.

The map is intended for use by state and county revenue officers to equalize land values in South Dakota, by individual buyers and sellers of land and lending institutions as a reference source, as a reference map by those planning road routes, cable lines, and pipelines, by conservationists in helping to keep current conservation needs inventories, by agronomists needing current information on distribution and patterns of crop growth, and by crop yield forecasters to guide sampling strategy.

South Dakota State University, Brookings, SD 57006

ERTS Mosaic of South Dakota and Soil Association Value Areas. South Dakota Agr. Exp. Sta. Info. Ser. No. 5, and Remote Sensing Institute No. SDSU-RSI 73-17. South Dakota State University. 1974.

South Dakota State University, Brookings, SD 57006

Identification of Soil Associations in South Dakota on ERTS 1 Imagery. Symposium proceedings Management and Utilization of Remote Sensing Data. pp. 610-629. The American Society of Photogrammetry. Sioux Falls, S.D. Oct. 29-Nov. 1, 1973.

Myers, V.I.

South Dakota State University, Brookings, SD 57006

Identification of Soil Associations in Western South Dakota on ERTS-1 Imagery. Symposium, Significant Results Obtained from Earth Resources Technology Satellite-1. Vol. 1. Technical Presentations, Section B. pp. 965-972. Goddard Space Flight Center, New Carroleton, Md. March 5-9, 1973.

SOIL ASSOCIATION maps show the spatial relationships of land units having characteristic soil depths and textures, available water capacities, permeabilities, pH characteristics, plasticity indices, liquid limits, and the like. Broad interpretations can be made from the maps, such as how the soil is suited as a source for topsoil and as a source for sand and gravel, how corrosive the soil is for steel and concrete, and what crop and grass yields can be expected. Film color composites of bands 4, 5, and 7 viewed over a light table with magnification show the soil associations of western South Dakota that are now recognized, and, in addition, several new soil association areas.

 Stout, H., Jr.
 Bannister, D.L.
 Frazee, C.J.

South Dakota State University, Brookings, SD 57006

Land Sale Prices in South Dakota and Their Relationship to Some Soil, Climatic, and Productivity Factors. Reprinted from Soil Science Society of America Proceedings 37(4). July-Aug. 1973. Madison, WI.

APPROXIMATELY 2,700 land sale figures were used along with individual county soil association maps to determine average per-acre values of South Dakota counties. Annual average precipitation and temperature data were connected to land-sale figures using multiple-regression equations. County crop productivity also was related to precipitation and county land sale data. The best prediction formula for explaining average county land values was a fifth-order polynomial-regression with precipitation as the variable. This explained 95 percent of the variance. Most of the variance (84 percent) of county cropland productivity was explained with a second-order polynomial-regression having annual-average precipitation as the variable; 86 percent of the variance of county land value figures was explained with a second-order polynomial-regression having county cropland productivity as the variable. However, only a little over 64 percent of the variance of individual farm sales could be explained using regression equations involving climate, slope, and soil-texture as variables.

Whiteside, Eugene P.

Mokma, Delbert L.

Schneider, Ivan F.

Michigan State University, East Lansing, MI 48824

Soil Descriptions for Oceana County, Michigan, 1972. Vol. 1., and Soil Maps, 1933, on an Aerial Photo Base. Vol II. Soils of Oceana County Michigan, 1972. Dept. of Crop and Soil Sciences, Michigan State in cooperation with Oceana County Board of Commissioners.

THE SOILS of Oceana County were mapped cooperatively by the U.S. Department of Agriculture and the Michigan Agricultural Experiment Station in 1932-33. The soil survey report, including a colored map at 1" = 1 mile, was published in 1939. The descriptions of the map units, their names, and their interpretations for various uses have been updated after field transects of the major map units and use of the soil maps in the Conservation Needs Inventory of 1958.

Use of the updated soil descriptions and interpretations, Volume I, has been facilitated by enlargement of the published soil map and its reproduction on an aerial photo base of 4" = 1 mile, with brief descriptions of the map unit compositions, Volume II. The entire cost of the updated soil report was about 3 percent of the cost of a modern soil survey report.

The soil map is adequate for general farm planning, farmland evaluation, and general land use planning purposes. Greater detail or on-site investigation is necessary for fruit or vegetable production, suburban planning purposes, or engineering uses. Current soil surveys in Michigan have similar limitations.

Wilkening, E. A.
Wopat, Priscilla
Linn, J.G.
McGranahan, D.
University of Wisconsin, Madison, WI 53706

Quality of Life in Kickapoo Valley Communities.
Institute of Environmental Studies. Sept. 1973.

THIS REPORT consists of the status of the services and opportunities available in twelve communities in the Kickapoo Valley of Western Wisconsin prior to the construction of a recreation-flood control reservoir. The quality of services and opportunities for work, recreation, and residence were obtained from about 20 designated and reputational leaders in each of the communities. These ratings are compared with factual data obtained from local and state levels. Attitudes toward the reservoir indicate that benefits are expected by those living just below the dam, while most others see both positive and negative effects. While size of community is positively associated with most services, those communities which had lost population in the past decade rated commercial services lower than other communities of similar size. The

ratings of educational activities in some of the smaller communities were higher than larger communities due to the efforts of the school boards and school officials.

Yahner, J.E.
Purdue University, Lafayette, IN 47907

Developing Soil Association Maps as a Resource Guide and Educational Tool. Agronomy Abstracts. p. 175. 1972.

GENERAL or soil association maps have a distinct place in the utilization of soils information in regional or area planning and can also provide a nearly ideal framework of general soil resource information for education of the public. Indiana is preparing an atlas of these maps. In addition to the maps, CNI data are being used to estimate the number, names, and approximate percentages of soils in the associations. With these estimates interpretative information can be easily applied to the association or developed for the association. Since these estimates are generally quantitative in form, the information can be collected and stored in automated data processing equipment for later recall and printout in a form usable by planners or other persons interested in soil resources.

VI. INDIVIDUAL AND FAMILY DECISION MAKING

Arnold, Julie E.
Ohio State University, Columbus, OH 43210

Measuring School Success During the Early Years: The Development of an Instrument. Unpublished M.S. thesis. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1972.

THE DEVELOPMENT of the instrument designed to measure school success of young rural children had two phases. Phase I: All first grade teachers in selected low-income, low-density Ohio counties wrote descriptive paragraphs of successful and unsuccessful children. The instrument was developed. Phase II: The instrument was used with 230 first grade children from these counties.

Scores of successful and unsuccessful children differed significantly. Results indicated the instrument was both valid and reliable and could be used to effectively assess the school success of rural first grade pupils.

Arthur, I.W.
Kaldor, D.R.
Eldridge, E.
Burchinal, L.G.
Iowa State University, Ames, IA 50010

In Choosing Occupations--What Incomes Do Farm Boys Expect? Iowa Farm Science 17(6): 7,8. Iowa Agr. Exp. Sta. Ext. Serv. Dec. 1962.

THIS ARTICLE is one of a series on how a number of factors affect the farm and nonfarm career plans of Iowa farm boys. This article reports on the income expectations and goals of the boys in the study.

Bender, Ralph E.
 Becker, William J.
 Ohio State University, Columbus, OH 43210

Technical Agriculture Programs in Ohio with Emphasis upon Student and Program Characteristics. Dept. of Agricultural Education, Ohio State University. 1968.

THE PRIMARY purpose of this study was to identify the characteristics of students in the four technical agriculture programs in Ohio and to determine the association between selected student characteristics and success in the program and later success in the world of work. Attention was also given to the drawing and holding power of the technical agriculture programs, forces which influenced students to enroll in and complete these programs, and to the adequacy with which the programs met the needs of students, graduates, and employers of graduates.

 Cummins, James E.
 Ohio State University, Columbus, OH 43210

Agricultural Technician Education in Ohio, 1971-72.
Ohio Report. Ohio State University. 1972.

THIS WORK attempts to identify the characteristics of students in the technical agriculture programs in Ohio and to determine the association between selected student characteristics, their success in the program, and their later success in life.

 Iverson, Maynard J.
 Feck, Vincent J.
 Ohio State University, Columbus, OH 43210

Student and Program Characteristics of Technical Agriculture Programs in Ohio. Dept. of Agricultural Education, Ohio State University. 1970.

THE MAJOR purpose of this study was to identify the characteristics of technical agriculture students in Ohio and to determine the association between selected student characteristics, student success in the technical programs, and student success later in the world of work.

Blankenberger, Maureen A.
Ohio State University, Columbus, OH 43210

Factors Affecting Level of Integration--Alienation of Disadvantaged Homemakers in Toledo, Ohio. Unpublished M.S. thesis. Ohio State University. 1971.

THE PURPOSE of this study was to examine demographic, social stability, self-perception, and socioeconomic-status factors related to integration-alienation-ed and integration-alienation-job of families. This study was a partial analysis of the NC-90 project, "Factors Affecting Patterns of Living of Disadvantaged Families." Data were collected through personal interviews with 143 homemakers in Toledo, Ohio, randomly selected from tracts designated as poverty areas by the U.S. Bureau of Census.

Bockbrader, Kathleen G.
Ohio State University, Columbus, OH 43210

Reward Orientations of Mothers and Teachers as Perceived by First Grade Children in Rural Low-Income Ohio Counties. Unpublished M.S. thesis. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1973.

ENVIRONMENTAL correlates of school success among first grade children of low-income, low-density Ohio counties were investigated. Family characteristics investigated include: sex of subjects, sex of siblings, age of siblings, number of siblings, birth of siblings, birth order of subjects, and family socioeconomic status. Neither family constellation variates nor child perception of maternal and teacher rewards, except recreation reward, related to school success. The child's choice of maternal reward orientation was influenced by his sex and birth order. Girls perceived more aca-

ademic rewards than did boys, and youngest children perceived more interpersonal rewards than did middle, oldest, or only children.

Budke, Jonnie H.
Ohio State University, Columbus, OH 43210

Effects of Mother's and Child's Perception of Maternal Reward Orientation on School Success of First Graders Living in Low-Income, Low-Density Ohio Counties. Unpublished M.S. thesis. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1973.

THE STUDY compared low-income mothers' reward orientation with their first grade child's perception of the maternal reward orientation and determined how this was related to school success. Mothers were asked to select their first choice activity for their child from groups of four reward orientations (academic, work, recreation, and interpersonal). These selections were compared with the first choice of their children. Significant findings were that mother/child agreement on reward orientations was related to school success ($B < .01$) and the sex of the child related to mother/child agreement only on academic orientation.

Boharic, Kathleen K.
University of Illinois, Urbana, IL 61801

Wife's Perception of Husband-Wife Roles in Major Decisions. Unpublished M.S. thesis. University of Illinois. 1973.

THIS STUDY investigates the relationship between the wife's perception of husband-wife roles in major family decisions and selected socioeconomic and social-psychological variables. Nuclear families from a survey of a stratified random sample of Champaign-Urbana were used. Data were obtained in the original survey by personal interviews of the mother or her substitute under age 65 years and in families with at least one child under 18. Five statements on who mainly decides on which friends (husband and wife) see the most, best place for family to live, about wife working outside the home, on how to handle the children, and how money

is used were added together to represent a measure of the wife's perception of husband-wife roles in making family decisions, and an Alpha of .48 was obtained.

Bollman, Stephan R.
Clay, Cheryl A.
Hasse, Charles
Kansas State University, Manhattan, KS 66502

Family Crisis Experiences of Hospitalized Adolescents.
Paper presented at Midwest Sociology Society, Omaha, NE.
April 1974.

CRISIS-PRODUCING events and family dynamics of prehospital family life of 39 adolescent mental patients in a midwestern psychiatric hospital are reported. An open-ended interview instrument was administered to hospitalized adolescents and their parents to determine family definitions of crisis and family organizational strength available to cope with stressful events.

A descriptive analysis of family organizational strength (economic security, inter-personal relationships, and conflicting roles) revealed that family organization was generally weak. Most families reported at least one crisis. Crises usually occurred as the result of long-term stresses (divorce), or they triggered a series of problems which weakened family organization beyond the ability of the family to fully recover (death, home burning).

The study indicates that crisis events are opportunities for local mental health workers to intervene in family processes before hospitalization becomes necessary, and that early detection and family therapy could reduce adolescent admissions to mental hospitals.

Elliot, Nancy C.
Moxley, Virginia M.
Kansas State University, Manhattan, KS 66502

Family and Community Activities of Rural Nonfarm Families with Children. Journal of Leisure Research.
(Forthcoming.)

IT IS hypothesized that six factors--resource level, stage of family life cycle, presence of a preschool child, family size, geographic mobility, and employment status of the mother--affect non-work activities of families with children. Families participating in voluntary organizations were those that had lived in a community more than a year, were in the upper resource group, and had no preschool age children. Families with preschool age children and an unemployed mother had a high frequency of home and family centered activities. The implications of this study indicate the need to determine what leisure activities meet the needs of parents with preschool children. The low participation in community activities by families that have moved in the past year points out the need for exploring ways of integrating new members into community activities.

 Helman, Dona P.
 Moxley, Virginia M.
 Kansas State University, Manhattan, KS 66502

Institutionalization and Behavior Problems of
 Adolescents Paper presented at Midwest Sociology Society
 Mtg. Milwaukee, WI. April 1973.

THE PURPOSE of the study was to identify patterns of family interaction and behavior problems of adolescent patients in a state mental hospital. Thirty-nine institutionalized adolescents and 59 parent figures from 38 families in nonmetropolitan midwest communities were interviewed in a case study approach to develop family profiles. The families were characterized by multiple marriages of parents, large size, and mobility of family members. Adolescents were most often referred to the hospital because of behavior problems, such as running away, repeated contacts with police, school problems, or parent-child conflicts. Parent-child relationships were strained by family quarreling, the presence of unwanted children, and the emotional and behavioral patterns of both adolescents and parents. Immediate family members of 24 percent of the adolescents had been in mental hospitals, and one parent in 36 percent of the families had been in jail. Findings indicate that family members in addition to the adolescent patient need supportive mental health services.

Bultena, Gordon L.
 Powers, Edward A.
 Iowa State University, Ames, IA 50010

Effects of Age-Grade Comparison on Adjustment in Later Life. In Jaber Gubrium, ed., Late Life: Recent Developments in the Sociology of Aging. Milwaukee: Charles C. Thomas, Publishers. 1974.

REFERENCE group theory is used to examine the psychological adjustment of older persons to changes in their life situations. The argument is tested that the "aged," in serving as a comparative reference group, provide a stabilizing influence on the morale of older persons confronted with serious role and status losses. The data are from a ten-year longitudinal study of aged persons in Iowa.

Powers, Edward A.
 Falkman, Peter
 Frederick, David
 Iowa State University, Ames, IA 50010

Life After 70 in Iowa. Soc. Rpt. No. 95. Dept. of Sociology. Iowa State University. Sept. 1971.

FINDINGS are reported from a study of changes over a ten-year period in the lives of some older Iowans. A study in 1960 by the Institute of Gerontology, at the State University of Iowa, provided base-line data for a restudy of the same respondents in 1971. The present report describes how the lives and attitudes of these persons had changed in the course of their growing old. Information also is presented on older persons who died during the 1960 decade.

Burchinal, Lee G.
 Kaldor, Donald R.
 Eldridge, Eber
 Arthur, I.W.
 Iowa State University, Ames, IA 50010

Education Affects Farm Boys' Career Plans. Iowa Farm Science 17(9): 17-19. Iowa Agr. Exp. Sta., Ext. Serv. March 1963.

THIS ARTICLE reports the differences in the educational and vocational plans, interests, and experiences found to exist between Iowa farm boys who planned to farm and those who planned nonfarm careers.

Kaldor, Donald R.
Eldridge, Eber
Arthur, I.W.
Iowa State University, Ames, IA 50010

Other than Income--What Influences Farm Boys' Career Choices? Iowa Farm Science 17(3): 18-20. Iowa Agr. Exp. Sta. Ext. Serv. Sept. 1962.

Creighton, Michael O.
Iowa State University, Ames, IA 50010

Social, Personal, and Demographic Correlates of Intergenerational Communication. Unpublished Ph.D. dissertation. Iowa State University. 1972.

THIS RESEARCH was designed to give greater precision to the concept of generation gap. The concepts of perceived gap, objective generation gap, and generation gap were theoretically defined. Certain demographic characteristics were found to be significantly related to the generation gap. The characteristics that were found to be important were sex, occupation of father, education of father, education of mother, and social class.

Cronwell, Ronald E.
Kansas State University, Manhattan, KS 66502

Development of a Parental Attitude Research Scale for Use with the Lower and Middle Classes. Unpublished M.S. thesis. Kansas State University. 1969.

THE PURPOSE of this publication was to develop a Parental Attitude Research Scale (PARS) to assess attitude of both the lower and middle classes. The Parental Attitude Research Instrument (PARI) was the research model. The PARI has been used widely and is highly reliable. Word reading level was controlled in the PARS so the disadvantaged respondent could understand the items. Research findings relevant to the lower class were used in developing items. A 125-item instrument was developed which contained 25 subscales with five homogeneous items in each subscale. Fifty lower class and 50 middle class subjects were tested. Twenty-one class-sensitive items were found. A class-sensitive item differentiated 40 percentage points or more between classes. The 21 class-sensitive, 15 nonsensitive, and 10 stratified random items were pooled to form a factor structure for factor analysis. Twelve separate factors were identified. Thirty-seven items were significant factors loading .49 or above. The 12 factors accounted for 68 percent of the total variance, with the first factor accounting for 28 percent of this total. This study indicated that maternal attitudes of the lower and the middle classes are different. These attitudes can be measured objectively.

Cummins, James E.
Bender, Ralph
Ohio State University, Columbus, OH 43210

"A Follow-Up of Technical Agricultural Graduates and Dropouts in Ohio." The Agricultural Education Magazine. June 1973.

THE PURPOSES of this study were: (1) to describe the occupational performance and educational attainment of persons completing and/or leaving the post-high school agricultural technician programs in Ohio; (2) to determine the degree to which graduates and dropouts are satisfied with their employment; and (3) to determine the degree to which employers are satisfied with graduates and dropouts of agricultural technician programs.

The universe of this study included all 1965, 1966, 1967 and 1968 graduates and dropouts of post-high school agricultural technician programs in Ohio, plus the employers of graduates and dropouts of these programs. The four agricultural programs included were agribusiness, agri-equipment,

food processing, and horticulture.

Dahlin, Marjorie B.
Iowa State University, Ames, IA 50010

Feminism and Equalitarianism Related to Marital Satisfaction of Wives in Rural Iowa. Unpublished M.S. thesis. Family Environment Dept. Iowa State University. 1973.

THIS STUDY focused on feminism, equalitarianism, and marital satisfaction and their relationships to each other as well as to certain demographic characteristics. A sample was randomly drawn from seven towns of 1,000 to 2,500 population in southwest Iowa. Data were provided by 160 female homemakers under age 65 with husband and at least one child under 18 years of age living at home. General hypotheses, in null form, stated that: (1) respondents' attitudes toward feminist beliefs, perceived equalitarianism, and marital satisfaction would be independent of selected demographic characteristics, and (2) feminism and equalitarianism would be independent of marital satisfaction. After statistical analysis, the first general null hypothesis was accepted, except in four cases: feminism and respondent's educational level, and feminism, equalitarianism, and marital satisfaction as related to husband-wife differences in occupational type. The second general hypothesis was rejected at the 0.001 level of significance.

Danielewicz, Alma-Jean T.
University of Illinois, Urbana, IL 61801

Wife's Perception of Income Adequacy in 488 Urban Nuclear Families. Unpublished M.S. thesis. University of Illinois. 1973.

THE RELATIONSHIP between the wife's perception of adequacy of family income and selected socioeconomic, satisfaction, family expectation, aspiration, and attitudinal variables was investigated in this study. The information was taken from a stratified random sample of urban families in Champaign-Urbana (488 of which were nuclear families). Data were obtained in the original survey by personal interviews with the mother or mother-substitute. Findings indicate that

there are significant relationships between the wife's perception of income adequacy and selected variables. Wives in families in which the husbands and wives were younger, had less education, were born in Champaign County, had the same amount of education, and where husbands and wives were employed in blue collar jobs were more likely to perceive their incomes as less adequate than those in families in which the husbands and wives were older, had more education, were born outside of Champaign County, had different amounts of education, and where husbands and wives were employed in other than blue collar jobs or where the wives were not employed. Other socioeconomic, aspiration, expectation, satisfaction, and perception variables were also significantly related to the wife's perception of income adequacy.

Dickerscheid, J.D.
Ohio State University, Columbus, OH 43210

Rural Children Under Six: An Approach for Supplementing Home Experiences. Ohio Agricultural Research and Development Center--Wooster. Ohio State University.
(Forthcoming.)

PRELIMINARY data analysis showed three of the home environment factors studied to be related at a significant level to school performance of rural, low-income, first grade children: mother's satisfaction with school, maternal reward orientation (MRO), and family socioeconomic status (SES). Maternal satisfaction with school explained the greatest amount of variance within school performance scores. Mother-child agreement on the MRO was related to school performance at the $p < .01$ level. Rural mother-child pairs matched more frequently on perceptions of the MRO than did urban mother-child pairs. Sex of the child affected this agreement only on the academic MRO. Considering only the child's perception of the MRO, girls perceived more academic MRO than did boys, and youngest children perceived more interpersonal MRO than did middle, oldest, or only children.

Vartuli, Sue A.
Ohio State University, Columbus, OH 43210

"Child-rearing Information. . .What do Rural Ohio Parents Want to Know?" Ohio Report Vol. 59, No. 1. pp. 12-14. Jan.-Feb. 1974.

 Vartuli, Sue A.
 Ohio State University, Columbus, OH 43210

Needs of Rural Ohio Parents for Child Rearing Information. Ohio Report. Jan.-Feb. 1974.

THE ARTICLE is addressed to three basic questions: 1) What child rearing information do rural Ohio parents want? 2) Are professionals knowledgeable about rural parents' needs for child rearing information? 3) What is the best way to provide this information to parents? Tentative answers to these questions are provided by mothers, fathers, and preschool teachers through their responses to mailed questionnaires. Mothers were most desirous of information on "sexual growth of children," fathers, on "setting rules and regulations," and teachers, on "parents talking to their preschool age child" and "learning about nursery school." Responses of parents and teachers differed significantly, with the teachers feeling parents needed more information than parents felt they needed. Pamphlets and newsletters were the most preferred media through which they wished to receive child rearing information. Mothers were more willing to attend meetings than fathers. Implications for parent education are included in the article.

Dunsing, Marilyn M.
 Hafstrom, Jeanne L.
 University of Illinois, Urbana, IL 61801

The Family's Life Style and the Near Environment.
Illinois Research 13(4): 12-13. 1971.

THE PURPOSE of this work was to find out how homemakers felt about three aspects of their near environment--house, neighborhood, and community. Households, stratified by occupation of the head, were randomly selected from the Champaign-Urbana City Directory. The interview-questionnaire method was used to collect information from 564 homemakers during the last half of 1970 and early 1971. Somewhat more of the women were satisfied with the community as a whole than with their neighborhood, and more were satis-

fied with their neighborhood than with their house. Yet 70 percent of the women wanted to be living in their present house (or one like it) in one year and 50 percent wanted to living there in five years. More women expected to be living in the same community, neighborhood, or house in one year than wanted to be living there. But the opposite was true for five years. More wanted to be living in the same environment, or one like it, than expected to be living there. Thus, the homemakers' perceptions of their environment relative to their expectations were more favorable for the longer than for the shorter period.

 Hafstrom, Jeanne L.
 University of Illinois, Urbana, IL 61801

Budgeting and Consumption Patterns of Illinois Families.
 1967. Illinois Home Econ. Ext. Rpt. No. 3782. 81 pp.
 1968.

 Hafstrom, Jeanne L.
 University of Illinois, Urbana, IL 61801

Consumer Prices and Expenditures of Illinois Families.
 1966. Illinois Home Econ. Ext. Rpt. No. 3781. 85 pp.
 1967.

 Hafstrom, Jeanne L.
 University of Illinois, Urbana, IL 61801

Income Expenditure Patterns of Illinois Families, 1968.
 Illinois Home Econ. Ext. Rpt. No. 3785. 77 pp. 1969.

Firebaugh, Francille M.
 Weaver, C. Richard
 Warren, Richard
 Ohio State University, Columbus, OH 43210

Reliability of Value Orientation Scales. Contribution
 No. 26-74. Ohio Agr. Res. and Devel. Center.

0150

(Forthcoming.)

DATA originating from an interregional project concerned with patterns of living of disadvantaged families were examined for two purposes: 1) to estimate internal reliability of value orientation scales as a basis for analyses, and 2) to consider differences in the selection of scale items for single states or for all states included in the study. Scales for four value orientations (abstractness-concreteness, control-fatalism, equalitarian-authoritarian, and integration-alienation) were developed for an education and an occupation focus. Data consisting of five items for each of the eight scales were available from twelve states. A Guttman's lambda 2 was computed for each scale using 26 combinations of individual items. Each combination was ranked according to the magnitude of the lambda 2 value. Consistency of appearance of items in combinations of highest reliability determined items selected for final use. Reliabilities varied from state to state but were relatively uniform within groups of states described as regions. This latter phenomenon suggests that some identifiable population parameters might be responsible for varying reliability.

Woodward, John
Daly, Ron
Ohio State University, Columbus, OH 43210

Factors Affecting Value Orientations of Homemakers. Unpublished paper. Dept. of Home Economics, Ohio State University. 1974.

THIS STUDY focused on the relation of living patterns and demographic factors to education and occupation value orientations of families living in low-income areas. Four dimensions of value orientation to education and occupation were included: abstractness-concreteness, control-fatalism, equalitarian-authoritarian, and integration-alienation. Data collected from 13 states were grouped according to whether samples represented urban or rural areas. Findings are based on least squares means to regression analyses for each of 28 scales of value orientations to education and occupation.

Respondents generally reported a concrete, controlling, integrative value orientation toward education and an abstract, controlling, authoritative and integrative orienta-

tion toward their job. Texans deviated from this pattern with a job value orientation which was more fatalistic, more alienated, and more equalitarian. Non-economic factors are significant in variance of value orientation scales. Of the 28 scales, parental permissiveness appeared in 24, family cohesion in nine, and marital satisfaction in eight as contributing significantly to variation in value orientation scales. Respondent's age and education were significant in more than 40 percent of the scales in the regression analyses.

Poster, Kathleen M.
Dickerscheid, Jean D.
Bockbrader, Kathleen G.
Ohio State University, Columbus, OH 43210

Undergraduate Research Education. Home Economics Research Journal 2(1): 54-55. Sept. 1973.

RESEARCH involvement of an undergraduate majoring in Family and Child Development is outlined in this article. Experiences in the experimental program indicate ways that the research function of Home Economics can be strengthened through cooperation between university disciplines within existing programs and without extensive funding. The research internship described was with the station-sponsored project, Hatch 405, Rural Children Under Six: An Approach for Supplementing Home Experiences Based on an Analysis of Environmental Characteristics.

Fowler, Evelyn S.
Purdue University, Lafayette, IN 47907

Factors Related to the Economic Well-Being of the Family. Home Economics Research Abstracts-1972. Family Economics-Home Management Dept. American Home Economics Assoc. p. 18. 1972.

THE OBJECTIVES of this study were to develop a model to predict the economic well-being of the family and to relate economic well-being to specific financial problems that families experienced and to flexibility in financial management. Data were collected through personal interviews with 310 homemakers in East Chicago, Indiana, and Toledo, Ohio, under

the NS-90 research project. Economic well-being was defined as the status of the family's economic situation and feelings about its situation. A composite dependent factor of the income index and the perceived adequacy of income index was created as the proxy for economic well-being. A regression model with 10 independent factors was developed to predict this well-being. The factors included occupation of the recipient of the main income, number of earners in the family, health of the family, ethnicity, marital status, age of the recipient of the main income, dependability of income, form of financial problems viewed as commitment, and number of financial problems.

Findings showed that families, in part, controlled their economic well-being through the percentage of income obligated to financial fixed commitments; experiencing specific financial problems was related to the family's financial situation; the frequency of specific financial problems and the economic well-being of the family were related; and the nine financial problems were experienced by some families at all levels of economic well-being.

Freedman, Ronald
Crombs, Lolagene

Childspacing and Family Economic Position. American Sociological Review 31: 631-648. Oct. 1966.

Ginsburg, Herbert.

The Myth of the Deprived Child. Prentice-Hall, Inc.
Englewood Cliffs, NJ. 1972.

Gray, Carolyn A.
Ohio State University, Columbus, OH 43210

Development of Value Orientation and Foresight Measures in Home Management. Unpublished M.S. thesis. Ohio State University. 1969.

THE PURPOSES of the investigation were to examine perceptual and conceptual foresight and to develop measures of foresight in home management, value orientations, fatal-

ism, and concreteness. If the measures were found to be reliable and valid, foresight in home management would then be examined in relation to value orientations and to college or noncollege educational levels. Ninety extension club homemakers answered a questionnaire. Age, years of marriage, and number of children were not considered. The conceptual foresight measure was found to be reliable but not valid, and perceptual foresight met neither test. The individual measures for concreteness-abstractness and fatalism-control were not reliable, except when taken as a whole. There was some indication that variance in conceptual foresight may be related to educational level and that educational level may be a factor for certain aspects of perceptual foresight.

Greninger, Sue A.
University of Illinois, Urbana, IL 61801

Determinants of Housing Satisfaction. Unpublished Ph.D. dissertation. Dept. of Home Economics. University of Illinois. 1973.

THE OBJECTIVE of the study was to determine the relative importance of specific socioeconomic, social psychological, and housing variables in explaining the wives' degree of housing satisfaction. Data were available for two urban samples--one of 488 nuclear families stratified by husband's occupation and one of 191 nuclear families randomly selected from areas designated as low income. A series of multiple regressions were run, using one-half and then the other half of the large sample to successively eliminate weaker independent variables. The resulting final set of 17 independent variables consisted of those which had the greatest influence (in terms of beta coefficients) on housing satisfaction. When this variable set was run using the large sample, significant beta coefficients were obtained for 11 variables; 8 significant in hypothesized directions. When run using the small sample, significant beta coefficients were obtained for 4 variables, all significant in hypothesized directions. The adjusted coefficients of multiple determination for the large and small samples were .33 and .29, respectively. For both samples, the variable having the greatest influence was satisfaction of the wife with her family's present standard of living. The findings suggest that certain social-psychological variables have considerable influence on housing satisfaction, but that socioeconomic and housing variables appear to have less influence than might be expected from the emphasis given them in previous studies.

Hafstrom, Jeanne L.
Dunsing, Marilyn M.
University of Illinois, Urbana, IL 61801

Level of Living: Factors Influencing the Homemaker's Satisfaction. Home Economics Research Journal. Vol. 2, No. 2. pp. 119-132. Dec. 1973.

THIS STUDY determined factors that influenced the homemaker's satisfaction with the family's level of living. Multivariate regression analysis with successive elimination of independent variables was used. Nuclear families from two samples were used. One sample was of 488 "typical" families, and the other sample was of 191 "disadvantaged" families. The general hypothesis tested is that the homemaker's satisfaction with the family's level of living is influenced by similar factors for both types of families. In addition, it is hypothesized that the factors having the most influence on "typical" homemakers will tend to be more abstract and less concrete; it is also hypothesized that the reverse is expected in the "disadvantaged" sample.

The results tend to support the general hypothesis and the specific hypothesis for the "typical" homemakers. They do not support the specific hypothesis for "disadvantaged" homemakers. The final regression explained 40 and 39 percent of the variance in the homemaker's satisfaction with level of living for the "typical" and "disadvantaged" samples, respectively. The adjusted coefficients of multiple determination for both samples were high for cross-section data, indicating that the method used should be given further consideration by other researchers.

Dunsing, Marilyn M.
University of Illinois, Urbana, IL 61801

Satisfaction and Education: A New Approach to Understanding Consumption Patterns. Home Economics Research Journal 1(1): 4-12. 1972.

Hahn, Vickie A.
University of Illinois, Urbana, IL 61801

Standard of Living Aspirations of 564 Urban Homemakers.
Home Economics Research Abstracts 1972. Family
Economics-Home Management Dept. American Home Economics
Assoc. p. 24.

THE PURPOSE of the study was to investigate whether or not what the homemaker wanted for her children, her husband, her family, and herself were significantly related to selected socioeconomic, attitude, perception, and expectation variables. A stratified random sample of 564 families was selected from Champaign-Urbana. Data were collected from the homemakers in personal interviews by use of a questionnaire. The results of the study clearly indicate that there were significant differences in what the homemaker wants for the members of her family between homemakers with different socioeconomic characteristics, attitudes, perceptions, and expectations. The homemaker was more likely to want only material things for the members of her family and less likely to want only nonmaterial things (1) the younger she and her husband were, (2) the less education she and her husband had, (3) the lower the family's social class, (4) the more frequently the family faced the problems of not being able to afford enough food and of getting behind on rent or house payments, (5) the less satisfied the homemaker was with her level of living, and (6) the less satisfied she was with the house in aspects other than size.

Hampel, Sandra M.
Ohio State University, Columbus, OH 43210

Child Care Information Needs as Related to Selected Demographic Characteristics of Parents of Preschool Children from Selected Low-Income, Low-Density Ohio Counties. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1973.

THE PURPOSE of the work was to determine the relationship between the parents' (1) education, (2) age, (3) income, (4) sex, (5) place of residence during childhood, and (6) expressed needs for child care information. A sample of 47 mothers and 33 fathers from low-income, low-density Ohio counties completed a checklist of 29 child care items and a demographic questionnaire. Findings indicated that education, sex, and residence were significant factors in differ-

entiating needs. Areas of concern in the order of expressed need were: 1) personality development, 2) management problems, 3) family relations, 4) normal development, 5) education, 6) mental and physical health, and 7) crisis.

Harpestad, Ona B.
University of Illinois, Urbana, IL 61801

The Influence of the Fathers' Education on the Choices, Expectations, and Goals of Fifty Married College Student Families. Home Economics Research Abstracts 1972. Family Economics-Home Management Dept. American Home Economics Assoc. p. 18.

THE PURPOSE of this work was to ascertain whether differences existed in the choices, expectations, and goals of two groups of married students attending the University of Illinois whose fathers had different levels of education. The 50 families used in the study were divided into two groups of equal size based on the combined years of education attained by the couples' fathers; in the Father's Education Higher (FEH) group, the combined years of education was 26 years or more, and in the Father's Education Lower (FEL) group it was 24 years or less. All of the husbands were college students; 72 percent of the wives were in FEH but only 28 percent of those in FEL were students at the time of the study. The respondents in FEL were much more likely than those in FEH to: (1) major in applied fields, (2) not have a Ph.D. degree as their goal, (3) attribute influence in their decision to attend college to themselves and their spouses, (4) have interruptions in their education, and (5) receive scholarships or fellowships. The respondents in FEL also were more likely than those in FEH to make joint decisions when purchasing durable goods and clothing, to own property, and to save for a specific purpose. In terms of careers, more men in FEL than in FEH set as their ultimate goal business ownership, whereas more men in FEH than in FEL expected to be employed in research and teaching.

Harrington, Michael.

The Other American: Poverty in the United States. The MacMillan Company. New York. 1963.

Hedgepeth, Gwendolyn T.
Ohio State University, Columbus, OH 43210

Initial Respondents and Later Respondents to a Mailed Parent Education Questionnaire: A Comparative Study. Unpublished M.S. thesis. Ohio Agricultural and Development Center--Wooster. Ohio State University. 1972.

THE PURPOSE of the study was to investigate the 19 nonrespondent mothers' demographic characteristics, their need for child rearing information, and their reasons for not complying. When compared with 44 initial respondents, no differences were found in demographic characteristics. The need for child rearing information differed significantly in the areas of normal development, management development, family relations, and crisis, but not in the areas of personal development, education, and mental and physical health. Failure to respond was attributed to lack of memory and procrastination.

Hess, Robert D.
Shipman, Virginia C.

Maternal Influences Upon Early Learning: The Cognitive Environment of Urban Preschool Children. Early Education: Current Theory, Research, and Action. Aldine Publishing Company. Chicago. 1968.

Hobbs, Daniel F.

Parenthood as a Crisis: A Third Study. Journal of Marriage and the Family 24: 367-372. Aug. 1965.

Transition to Parenthood: A Replication and an Extension. Journal of Marriage and the Family 27: 413-417. Aug. 1968.

Hollenbeck, Carole L.
University of Illinois, Urbana, IL 61801

Husband-Wife Influence in Purchasing Decisions. Home Economics Research Abstracts 1972. Family Economics-Home Management Dept. American Home Economics Assoc. p. 19.

THE DETERMINATION of the relative importance of selected socioeconomic variables, interaction variables, and personality variables in explaining family influence was the purpose of this work. Another purpose was to develop scales for measuring influence in family decision making. Data were obtained from a random sample of 100 families, stratified on the basis of number of years married and wife's employment status. Both husband and wife were interviewed. In this study, decisions were confined to when to make purchases for the family, and a behavioral rather than a survey method was used to collect data. In addition to traditional socioeconomic variables, interaction, personality, and infrequently used socioeconomic variables, such as number of hours away from home of both husband and wife, were included. Multiple regression analysis was used.

The findings support the hypotheses that, with a given number of independent variables, influence in family purchasing decisions would be explained better by a combination of socioeconomic, interaction, and personality variables than by any one group of variables, and that of the three groups of variables, personality variables would be most closely related to influence in family purchasing. Findings do not support the expectation that those interaction categories in which each spouse traditionally excels would be significantly related to influence.

Horner, James T.
Buterbaugh, James G.
Carefoot, J. Judith
University of Nebraska, Lincoln, NE 68503

Factors Relating to Occupational and Educational Decision Making of Rural Youth. Departmental Rpt. No. 1. Dept. of Agricultural Education, University of Nebraska. April 1967.

 Peterson, Roland L.
 Harvill, Leo M.
 University of Nebraska, Lincoln, NE 68503

An Experimental Evaluation of Approaches to Preparing High School Students for Agricultural Occupations Other Than Farming (Principles Versus Traditional Approach to Teaching Vocational Agriculture). Final Report. Project No. 001-65. Grand No. OE-05-85-020. Bureau of Research. Office of Education. U.S. Dept. of Health, Education, and Welfare. June 1969.

THE CENTRAL problem of this study was to evaluate the effects of selected treatment and classification factors on the preparation of high school students for initial entry into agricultural occupations other than farming. A secondary phase of the study was to compare the effectiveness of structuring agricultural subject matter based on the "principles" approach with the traditional approach.

Twenty-four randomly selected Nebraska schools, excluding the metropolitan high schools of Lincoln and Omaha, comprised the sample for this pilot study. Students enrolled in grades 10-12 constituted the subjects studied. Sixteen of the 24 schools offered vocational agriculture courses prior to this study. The remaining eight schools initiated a program of vocational agriculture instruction when the study began.

Iverson, Maynard J.
 Bender, Ralph E.
 Ohio State University, Columbus, OH 43210

Guidelines for the Development of Student Organizations Associated with Agricultural Programs at Two-Year, Post-Secondary Educational Institutions in the United States. Dept. of Agricultural Education, Ohio State University. 1971.

THE PURPOSE of this work was to develop guidelines for use in the initiation and operation of student organizations associated with agricultural programs at two-year, postsec-

ondary educational institutions in the United States. Specific goals were to (1) determine current status, past modifications, and future trends of the clubs, and major constraints which institutions have regarding agricultural student organizations; and to (2) synthesize, refine, and evaluate guidelines for use in the development and operation of such groups. The survey included 215 post-secondary institutions with agricultural offerings, 100 of which were identified by state officials as having related student organizations and 115 (a 50 percent random sample) of the remaining institutions.

Ten major guidelines were devised to deal with the following: the organizational role, initiating procedures, objectives, names, membership, leadership, organizational levels, coordination with other groups, activities, and finances.

Jensen, Arthur R.
Harvard University, Boston, MA 02138

How Much Can We Boost IQ and Scholastic Achievement?
Harvard Educational Review 39(1): 1-123. Harvard University Press. Winter 1969.

Jeries, Naheel
University of Illinois, Urbana, IL 61801

Determinants of Wife's Perception of Selected Aspects of Husband-Wife Verbal Communication. Unpublished Ph.D. dissertation. University of Illinois. 1973.

THE PURPOSE of this study was to find out how important socioeconomic, verbal communication, value and goal orientation, perception, sociability, and satisfication variables are in explaining husband-wife communication about things the wife wanted for her husband and for the children. Data were used from an urban sample of 488 nuclear families. Two dependent dichotomous variables were used--wife discussed (or not) with her husband the things she wanted for him, and wife discussed (or not) with her husband the things she wanted for the children. Ordinary least squares and two-stage least squares analyses were used. The results in terms of the adjusted coefficients of multiple determination (OLS) explained husband-wife discussion of things the wife wanted

better for the husband (.16) than for the children (.05), significant at the .01 and .05 levels, respectively. The standard errors of estimate for 2SLS were .40063 for children and .48604 for husband. The general hypothesis that husband-wife communication will be related to social, psychological, and economic characteristics was only partially supported.

Kaldor, Donald R.
Zytowski, Donald G.
Iowa State University, Ames, IA 50010

A Maximizing Model of Occupational Decision Making.
Personnel and Guidance Journal. April 1969. pp.
781-788.

THIS PAPER proposes a theory of occupational choice derived from the tenets of economic decision making. It asserts that the determinants of occupational choice are: (1) the chooser's occupational utility functions (preference system); (2) the resources or inputs at the disposal of the individual; and (3) the anticipated consequences of employing given resources in various occupations with differing potential for gratification. The strategy employed in the resolution of choice is maximization of net gain. The concept of substitutability of occupational utility functions is introduced, and the genesis of utility is discussed.

Kalyan-Masih, Violet
University of Nebraska, Lincoln, NE 68503

Dropouts or Pushouts? Farm, Ranch and Home Quarterly.
Fall 1972. pp. 21-23.

AN INTERVIEW schedule consisting of 20 questions was given to 89 parents living on three reservations in Nebraska around Macy, Winnebago, and Niobrara. This paper is based on data from one of the questions: "In your judgment, what are some of the reasons why Indian children quit school?"

The responses were content analyzed, divided into response units, and assigned to five categories of reasons: Family and Home, School, Personal and Social, Financial, and Cultural. Young people from Indian families have been "pushed out" of school systems by a vicious circle of pover-

ty, alcoholism, and marital discord in fractured families; by a dehumanizing and hostile school situation that aggravates the problem by its emphasis on irrelevance and trivia to the exclusion of pride and dignity in Indianess; by a peer group that values "escapades" above school achievement and alienates those trying for excellence; by a dominant society that equates culture with conformity, that emphasizes education but rewards spectator sports. American Indian students trapped in this vicious circle have limited changes of survival in school or in society.

Kepley, Veree E.

University of Illinois, Urbana, IL 61801

Analysis of Use, Attitudes and Knowledge Related to Credit of 25 Black and 25 White Families. Home Economics Research Abstracts 1972. Family Economics-Home Management Dept. American Home Economics Assoc. p. 26.

AN ANALYSIS of families' use, attitudes, and knowledge of different forms of credit is included in this study. Data were gathered from a random sample of 25 black and 25 white families in two fairly new subdivisions developed by one builder in houses in the \$15,000 to \$18,000 price range. In personal interviews, both husband and wife responded to a questionnaire containing attitude and knowledge statements and questions regarding their present use, past use, and future plans for use of credit. All of the families had used and are now using some form of credit. Significantly more white families had at some time used 30-day charge accounts than black families, while more black families had at some time used revolving charge accounts than white families. Knowledge scores for white families, white husbands, white wives, and husbands were higher than for black families, black husbands, black wives, and wives, respectively. In general, in regard to attitude statements, black families, black husbands, black wives, and wives were more favorable toward credit than white families, white husbands, white wives, and husbands, respectively.

Kern, Bonnie Jo K.

Iowa State University, Ames, IA 50010

Socioeconomic Differentials in Management Problems of Young Urban Families. Unpublished M.S. thesis. Family

0163

Environment Dept. Iowa State University. 1967.

THE OBJECTIVES of the survey were to: (1) determine awareness of young mothers concerning decisions they make with respect to their home and family life, (2) ascertain the possibility of classifying their decisions by awareness of resources and operational concerns, and (3) test associations of types of problem awareness with age levels of their oldest children and socioeconomic class. From a random sample in a small city in central Iowa, interviews were made with 191 young mothers under 40 years of age with husbands and children present. Responses were obtained and analyzed in terms of three time perspectives: past, present, and future decisions. Age levels of children and socioeconomic class appeared to be associated positively with extent of time perspective. A panel was able to classify responses by resource and operational awareness. On the whole, responses most frequently involved human resources and policy concerns. Decisions about time and money resources were mentioned more frequently in present than in past and future time orientations. General awareness appeared to be lowest when oldest children were teenagers and socioeconomic level was relatively high. These mothers were most frequently concerned with decisions involving human resources.

Lovingood, Rebecca
 Firebaugh, Francille
 Deacon, Ruth
 Ohio State University, Columbus, OH 43210

Family Income in an Urban, Low-Income Area. Ohio Report
 57(5): 77-79. Sept.-Oct. 1972.

THE PURPOSE of this study was to examine the amount and perceived adequacy of family income as reported by homemakers in an urban, low-income area. Data were collected through personal interviews with 170 homemakers in Toledo, Ohio, randomly selected from tracts designated as poverty areas by the Bureau of Census. Homemakers interviewed had at least one child 18 years of age or under living at home. Annual incomes ranged from under \$4,000 to \$12,000 or more. More than half the families received \$7,999 or less. Average annual income from all sources was \$6,548 for blacks and \$8,156 for whites.

An income adequacy index was devised for each family. The level at which income is equal to the poverty threshold is reflected by an income index of 100. As the income index moved above the poverty threshold, homemakers perceived increased levels of adequacy. As the income index increased, there was a decrease in the portion of homemakers often having problems meeting commitments for rent, food, clothing, and savings. Within each income group, fewer homemakers experienced problems with rent commitments than with commitments for food, clothing, or savings.

Lionberger, Herbert F.
University of Missouri, Columbia, MO 65201

Organizational Issues Involved in the Development and Operation of Farm Informational Systems for Modernizing Agriculture. Journal of Developing Areas. Vol. 8, No. 3. pp. 395-407. April 1974.

THIS IS a general paper which draws on previous research concerning the organization and operation of farm informational systems. An implicit assumption is that the development and dissemination of scientific farm information must be a specialized business that starts with the assumption that functional requisites--innovation, dissemination, and integration--are inviolate, but that there are a number of organizational alternatives for achieving these ends. Observations and conclusions are included.

Campbell, Rex R.
University of Missouri, Columbia, MO 65201

Structural Influences of Personal Attributes on Social and Informational Relationships of Farm Operators in a Missouri Community. Rural Sociology 36(4): 533-546. Dec. 1971.

INCLUDED in this article are methods for determining how and the extent to which personal attribute structure, interpersonal communication, and choice preferences were explored; namely, tendencies to select persons similar to self (segregated pattern) and different from self (differentiated pattern). Differentiation was generally greater for informa-

tional than for social interaction. Segregated patterns, though very few in number, were most prevalent in the social interactional choices.

Although the authors feel that the methodological devices described in this study were a distinct improvement over those used in the past, a much more refined method of conceptualizing and measuring the structuring influence of personal attributes on personal choice is needed.

Chang, H.C.
University of Missouri, Columbia, MO 65201

Communication and Use of Scientific Farm Information by Farmers in Two Taiwan Agricultural Villages. Missouri Agr. Exp. Sta. Res. Bul. No. 940. May 23, 1968.

A 1966 STUDY of 368 farmers in two Taiwan villages, one economically advantaged and the other economically disadvantaged, indicated the higher reliance of farmers on Farmers Association Extension Advisors as a most important influence in farm practice adoption decisions. This indicated much higher confidence in professional farm information sources than most U.S. diffusion studies.

The tendency to legitimation of farm practice decisions by agricultural advisors in the absence of local trial and consultation with other farmers immensely accelerated the rate of farm practice adoptions.

The extension system was better adjusted to supplying quality information for traditional crops than for the emerging minor ones, thus indicating a lag in research and extension behind needed information.

Chang, H.C.
University of Missouri, Columbia, MO 65201

Farm Information for Modernizing Agriculture: The Taiwan System. Praeger Publishers. New York. 1970.

THIS BOOK reports a comprehensive study of the organization and operation of an entire farm informational system from the provincial level to farmers. Samples of communicators, administrators, and advisors at every level of operation were interviewed to determine the communicative linkages up and down the organizational hierarchy through which information could flow from the research source to the farmers and in turn be influenced by the input of farmers' expressed needs.

Interpretation, generalizations, and recommended implications are made within the framework of an information systems model which specifies innovation, dissemination, and integration functions but in an organizational context quite different from the United States, where land grant universities are central to the system.

Functional and disfunctional role combinations are identified and specified in the report. Implications for workable alternatives for agricultural research and extension organization and for their management and control are noted.

Copus, Gary D.

University of Missouri, Columbia, MO 65201

Structuring Influence of Social Cliques on Farm Information-Seeking Relationships with Agricultural Elites and Nonelites in Two Missouri Communities. Rural Sociology 37(1): 73-85. March 1972.

THIS STUDY examines the comparative structuring influence of social cliques on four types of farm informational-seeking relationships of farmers, with agricultural elites and nonelites as sources of farm information in a rapidly changing and relatively stable Missouri community. Findings were (1) that cliques facilitated communication within cliques, but less for elites than nonelites, and (2) that the importance of the information to the seeker negated barriers to contacts across clique lines. A contrary finding (3) that clique membership facilitated informational contacts across clique lines was explained by the fact that clique members were better qualified to give advice about farming than those who were not members. A unique method of defining the geographic area in which interpersonal informational relationships could be expected to occur among farmers is presented as a methodological contribution of the study of sociometric

relationships.

Francis, Joe D.
University of Missouri, Columbia, MO 65201

Views of Farm Information Sources Held by Farm Operators
in Two Missouri Farm Communities, Ozark and Prairie.
Missouri Agr. Exp. Sta. Res. Bul. No. 948. Jan. 15,
1969.

THE STUDY involves an intricate use of semantic differential and factor analysis techniques to conceptualize and measure views held by farmers of farm information sources and how they viewed specific information sources in terms of this conceptual scheme. Utility, affectivity, practicality, and accessibility dimensions were abstracted. The utilitarian and practicality views seemed to approximate expertise and practicality components of what others have referred to as credibility.

A composite general acceptability measure applied to information sources that the farmers used indicated that persons who are regarded as the most important influences in own adoption decisions (legitimizers) were held in highest esteem in Ozark followed in order by persons regarded as innovators. County extension agents, farm magazines, and television followed in descending order.

In Prairie, a relatively economically advantaged farm community compared to Ozark, "persons named most influential in own adoption decisions," again rated highest but with innovator referents, county extension agents, and agricultural chemical dealers rated almost equally in second order of importance. Radio (not rated in Ozark) rated lowest, with television and farm magazines a little higher. Ratings on specific views were generally similar to the composite.

Francis, Joe D.
University of Missouri, Columbia, MO 65201

Views Held of Innovator and Influence Referents as
Sources of Farm Information in a Missouri Community.
Rural Sociology 34(2): 197-211. June 1969.

THIS STUDY was directed to the conceptualization of views held of farm information sources and to assessing the differential manner in which farmers in a south Missouri community viewed personal innovator and influence referents as sources of farm information. Semantic differential and factor analysis techniques were used to conceptualize utility, effectivity, practicality, and accessibility views. Although the two referent types were seen as being close in semantic space, influence referents were generally held in higher esteem as farm information sources than innovator referents.

 Yeh, Chii-jeng
 University of Missouri, Columbia, MO 65201

Comparative Structuring Influence of Neighborhoods, Social Clique and Church Groups on Interpersonal Communication of Farm Information in Two Missouri Communities, 1956-1966. Growth and Change: A Journal of Regional Development. Vol. 6, No. 1. pp. 23-31. Jan. 1975.

THIS STUDY is concerned with interpersonal communication of farm information in an economically advantaged Missouri community (Prairie) and an economically disadvantaged one (Ozark) over a 10-year period, 1956-1966. All groups tended to facilitate farm talk and information exchange among own members, but contrary to expectations, social cliques failed to place constraints on getting information across their boundaries. Inclinations to clique boundary crossings increased over the 10-year period.

Neighborhoods tenaciously persisted in economically advantaged Prairie and continued to exercise some constraints on the acquisition of information across neighborhood boundaries. Although neighborhoods tended to physically disappear in Ozark, those that remained continued to exercise a constraining influence on farm talk and information exchange across their boundaries.

There was a tendency for farm talk to become increasingly concentrated in own social clique in Ozark but for information seekers to increasingly cross clique boundaries for getting important farm information.

In Prairie, there was an inclination for farm talk to become increasingly concentrated in both own social clique and in own church group, but clique boundary crossing for getting important farm information also increased.

Yeh, Chii-jeng

Copus, Gary D.

University of Missouri, Columbia, MO 65201

Changing Structure of Farm Information Flow Through the Interpersonal Network in Two Missouri Communities, 1956-1966. Scheduled for publication as a research monograph in the Rural Sociology series. (Forthcoming.)

THIS STUDY is concerned with structuring influence of social groups (neighborhoods, social cliques, and church groups) and personal attributes on farm talk and information seeking behavior of farmers in two Missouri communities over a ten-year period (1956-1966).

Loya, Alan L.

South Dakota State University, Brookings, SD 57006

South Dakota Farm Boys Planning Farm and Nonfarm Occupations: A Comparative Analysis. Unpublished M.S. thesis. Dept. of Rural Sociology. South Dakota State University. 1969.

Maloch, Francille

Deacon, Ruth E.

Ohio State University, Columbus, OH 43210

Components of Home Management in Relation to Selected Variables. OARDC Res. Bul. No. 1042. Ohio State University. Columbus. 38 pp. Nov. 1970.

Marshall, Douglas G.

Nakamura, Anne

Reinhardt, Hazel

University of Wisconsin, Madison, WI 53706

Family Adjustment in Selected Low Income Areas of Northern Wisconsin. Prelim. Rpt. No. 2. Agency and Institutional Attitudes. Dept. of Rural Sociology. University of Wisconsin. May 1968.

Reinhardt, Hazel
University of Wisconsin, Madison, WI 53706

Fertility in Wisconsin, 1960-1970. 1970 Pop. Note No. 2. Dept. of Rural Sociology. University of Wisconsin. May 1973.

Reinhardt, Hazel
Keyes, Joan
Marshall, Terry
University of Wisconsin, Madison, WI 53706

Family Adjustment in Selected Low Income Areas of Northern Wisconsin, Poverty Reports. Dept. of Rural Sociology. University of Wisconsin. 1968.

Reinhardt, Hazel
Keyes, Joan
Marshall, Terry
University of Wisconsin, Madison, WI 53706

Family Adjustment in Selected Low-Income Areas of Northern Wisconsin. Institute for Research on Poverty. University of Wisconsin. 1968.

THIS PUBLICATION focuses on a study conducted into two counties of the 17-county northern region of Wisconsin. Persistent problems of four decades--low income, high outmigration of youth, and a high proportion of dependent population--are discussed.

Major emphasis in seeking solutions to the counties' problems was usually phrased in terms of a need for more job opportunities. A common assumption was that efforts to help

individuals increase their economic position necessarily go hand-in-hand with efforts to improve the county. However, efforts to upgrade individual standards of living may actually assist the continued outmigration of youth and movement from farms (job training programs are an example).

Jobs and job training cannot solve the problems of a major segment of the community--the elderly. Only some kind of increased public expenditures can lift them above the poverty line. Noneconomic attractions are important, such as physical and climatic attraction of the region, presence of friends and relatives, and love of the rural way of life.

McClure, William P.
Pence, Audra May
University of Illinois, Urbana, IL 61820

Early Childhood and Basic Elementary and Secondary Education: Needs, Programs, Demands, Costs. National Educational Finance Project. Special Study No. 1. Bureau of Educational Research. College of Education. University of Illinois. 1970.

McCord, Ivalee H.
Bollman, Stephan R.
Kansas State University, Manhattan, KS 66502

New Directions for Extension Family Programs. Journal of Extension 10 (2): 36-43. Summer 1972.

LIVING IN today's complex world and facing pressures from outside and within have created a situation that finds many of America's families in stress. There are no boundaries, for such families exist in all segments of society--among the urban and rural, the rich and poor. What role can and should extension perform to provide preventive measures that will enable families to cope with and avoid many stressful situations? The authors share findings from an in-depth study involving 30 midwest families and discuss implications for programming in extension to strengthen the quality of family life.

Moxley, Virginia M

White, Nancy J.
 Bollman, Stephan R.
 Kansas State University, Manhattan, KS 66502

Family Backgrounds of Emotionally Disturbed Children.
Home Economics Research Journal 1(4). June 1973.

THIS STUDY reports on family backgrounds of 32 children and adolescents who were patients in one mental hospital in a midwestern state. Parent figures, all of whom lived in rural areas, were interviewed, and data from hospital records were obtained to examine possible association between problems of children and problems of their families. Family stress and a lack of family unity from marital discord, low incomes, and inability of the parents and children to relate to each other were evident. Parents, as well as children, had symptoms of emotional instability. Community mental health resources were often inadequate or financially unavailable.

Nall, Martha A.
 Purdue University, West Lafayette, IN 47907

The Relationship of Selected Factors to Financial Problems. Home Economics Research Abstracts-1972. Family Economics-Home Management Dept. American Home Economics Assoc. 1972. p. 21.

THE OBJECTIVES were to develop a financial problem frequency index; determine the relationships of the number of financial problems and index to education, ethnic group, socio-ethnic status, stage of family life cycle, percentage of total income used for credit, and family income; and determine relationships of income index based on poverty threshold to stage of family life cycle, financial problems, and ethnic group. Data collected for the NC-90 research project were obtained from 363 Indiana and Ohio families living in disadvantaged areas. Thirty-nine percent of the families "often" had the problem of "being able to save." Ability to save money increased as education increased. Ethnic groups differed in total number of problems, frequency index, and in problem intensities for ability to buy children's things, dentist, doctor or medicine, large bills, maintenance of equipment, and clothing. Blacks and Spanish-Americans experienced financial problems more than Whites. The families in the upper and lower-lower classes had the highest problem frequencies and number of problems. Percentage of income

used for credit was related to ability to meet large bills. As both income index and family income increased, problem frequency decreased. "Not being able to buy special things the kids want" was a greater problem for families in the extended, high school, and grade school stages than for families in the other stages. An assumption was that problems were a result of management, priority, and income limitations. Findings supported this.

Paulsen, Arnold A.
Iowa State University, Ames, IA 50010

Problems of and Policies for Improving the Level of Living in Rural Communities, Particularly for Marginal Economic Groups. Benefi's and Burdens of Rural Development. Iowa State Center for Agricultural and Economic Development. 1970. pp. 288-293.

THE MARGINAL groups of rural areas are miserable because they have few human or capital resources, there are few jobs relative to people and skills in rural areas, and there are poor private and public services. Farm Price Supports have no effect on the level of living of marginal economic groups. Neither does agri-technology and extension. Full employment helps the workers. Better schools promote outmigration. More equal welfare would help some, but community leader education might improve the level of living of marginal groups greatly.

Saupe, William
Daft, Lynn
Iowa State University, Ames, IA 50010

Our Poor Neighbors. Farm Foundation. National Committee on Agricultural Policy. Ag. Policy Institute at North Carolina State University, and the Center for Agricultural and Economic Development. Iowa STATE University. 1970.

IN THE FALL of 1969, the National Agricultural Policy Committee, a public affairs program development group for the national Extension Committee on Organization and Policy, was requested by a regional group of public affairs specialists

to prepare information on welfare and income maintenance programs for rural areas.

In December, the NAPC appointed a steering committee on the Joint Project for Developing Educational Materials on Income Maintenance. That committee met with representatives of the joint sponsors to consider preparing educational materials, including a self-teaching publication about poverty and income maintenance programs.

The authors and an editor were appointed to assemble information and produce a draft for review. The authors gratefully acknowledge the helpful suggestions offered by this Special Review Committee.

The authors then completed this publication independently. It is intended for use by Cooperative Extension Service personnel and others in educational programs about poverty and income maintenance. It is hoped that interested opinion leaders will be able to make better informed decisions about welfare and income maintenance issues in the future as a result of this publication.

Pavlas, Frances Magdelene
Iowa State University, Ames, IA 50010

Social and Psychological Aspects of the Family Associated with Membership in Formal Voluntary Associations. Unpublished M.S. thesis. Family Environment Dept. Iowa State University. 1973.

THE PURPOSE of this study was to examine the social and psychological characteristics of the family which are associated with adult participation in formal voluntary associations on the community level. The formal participation measure included degrees of attendance at church groups, groups connected with the church, VFW or other groups, PTA or other community groups, and recreational groups. The family characteristics included: (1) the situational determinants of age, socioeconomic level, family size, stage of family life cycle, and housing status; (2) the informal interaction pattern of the family as measured by family cohesiveness, kinship, orientation, neighboring, and informal participation; and (3) the psychological aspects of the family as measured by anomie.

A total of 185 households having a female homemaker under 65 years of age and one or more children under 18 years of age were included in the sample. Four of the hypothesized variables (socioeconomic level, anomie, family cohesiveness, and visiting with friends from work) accounted for 27 percent of the variance in the dependent variable of voluntary participation. The socioeconomic level variable accounted for nearly 21 percent of the variance related to community participation.

Pederson, Jean S.
South Dakota State University, Brookings, SD 57006

Selected Social and Personal Factors Associated with the Educational and Occupational Aspirations of Rural South Dakota Youth. Unpublished M.S. thesis. Dept. of Rural Sociology. South Dakota State University. 1969.

Phillips, G. Howard
Ohio State University, Columbus, OH 43210

Attitudes and Opinions on Current Issues. Ohio Report 57(4): 54-56. Ohio Agricultural Research and Development Center--Wooster. July-Aug. 1972.

THIS STUDY was initiated to learn more about the values and characteristics of the approximately 1.7 million nonfarm Ohioans living in the open country. Two stratified random samples were drawn and combined to constitute the sample of population. A questionnaire was developed and mailed to a sample of 412 Ohio Farm Bureau associate members. These associate members were randomly selected from a mailing list of members with a rural route address and who were not farmers. A second sample was randomly drawn in Perry County, Wyandot County, and the Franklin-Delaware-Pickaway Counties area.

Findings indicate that rural nonfarm people of Ohio are generally opposed to the idea of persons having a basic right to public welfare and are generally opposed to the idea of a guaranteed minimum family income subsidized by government.

A further analysis of attitudinal positions was conducted for education, occupation, income, and age. Only income was predictive of one attitude in both attitudinal areas.

Educational attainment was related to the attitude of guaranteed minimum family income. Occupation and age were not related to either attitude. The lower one's income, the more he is likely to be supportive of welfare rights and guaranteed income.

Bottum, John S.
Ohio State University, Columbus, OH 43210

Quality of Community Services. Ohio Appalachian Regional Community Study Report 3. Ohio Agricultural Research Development Center--Wooster. Ohio State University. Dec. 1968.

THE PRIMARY purpose of this study was to determine the quality of selected community services offered in the Ohio area of the Appalachian Region. The Appalachian Region of Ohio (ARO) is composed of 28 counties. Interviews were conducted in all 233 incorporated communities and five unincorporated areas. Both primary and secondary data were used in analyzing the quality of services. Each community was evaluated and ranked in terms of the quality of schools, water system, sewers, health service, restaurants, libraries, parks and playgrounds, solid waste disposal system, and fire protection. In addition, communities were rated in terms of overall appearance. In each area, a rating system was devised for comparative purposes. National or state standards were employed where available.

Powers, Edward A.
Iowa State University, Ames, IA 50010

The Effect of the Wife's Employment on Household Tasks Among Postparental Couples: A Research Note. Ageing and Human Development 2: 284-287. 1971.

THIS ARTICLE considers the household division of labor among postparental couples. It was found that postparental husbands of working wives are more likely to perform almost all household tasks, particularly the traditionally female-linked tasks. Despite this, there does continue to be a rather traditional sex-lined division of labor in the postparental family whether or not the wife works.

 Bultena, Gordon L.
 Iowa State University, Ames, IA 50010

Characteristics of Deceased Dropouts in Longitudinal Research. Journal of Gerontology 27: 530-535. 1972.

A COMPARATIVE analysis is made of the characteristics and attitudes (as determined in 1960) of older persons who survived the 1960 decade and those who died. It is found that while aged persons lost through death in longitudinal research occupied more deprived statuses than reinterviewed respondents, they did not differ in their general orientations toward life. The manner in which deceased dropouts may affect conclusions obtained from longitudinal research on aging is assessed.

 Golinvaux, J.P.
 Iowa State University, Ames, IA 50010

The Aged in an Affluent Society: A Resource Book. Cooperative Extension Service. Iowa State University. Nov. 1972.

THIS IS a resource book designed to assist in education and program development activities in the area of aging. Information is divided into four topics: the aged--size and scope of the problem; the aging process; the personal side of aging; and program development. The material has been prepared in such a way that it may be given independently as separate educational programs, as a series of presentations, or as the basis for a one-day workshop. Slides and tapes are included.

 Goudy, Willis J.
 Iowa State University, Ames, IA 50010

Examination of the Meaning of Work to Older Workers. Aging and Human Development 2: 38-49. 1971.

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THIS ARTICLE considers the meaning of work to the older workers through a hypothetical offer of an inheritance. It is found that less than 60 percent of older workers would accept an annuity and quit working. Those willing to quit working would do so because such an arrangement would guarantee an income, would free the individual to do as he wants, and would finally allow him to "take it easy." Older workers not willing to quit feel that employment gives meaning to life, provides enjoyment, or that to accept an annuity would be to get something for nothing.

Raetzke, Carolyn P.
University of Illinois, Urbana, IL 61801

Family Orientation of 550 Urban Families. Unpublished M.S. thesis. University of Illinois. 1973.

A STRATIFIED random sample of 550 families was available from Champaign-Urbana to determine whether or not family orientation as classified by two scales was significantly related to: socioeconomic characteristics, family variables, relative interaction variables, and interaction outside of the family variables. Personal interviews were used to collect data from homemakers. Two measures of family orientation were used to classify the data--Modified-Litwak Scale and an Adapted Scale originated by the author. The results of this study did not indicate either of the family orientation scales to be superior to the other on the basis of the number of significantly related variables. However, there were some differences between these scales in the number of different types of variables significantly related to family orientation. The results of this study indicate that there are significant differences between families classified as nuclear-oriented and extended-oriented with regard to socioeconomic characteristics, general family questions, the homemaker's expectations and aspirations, child and home-related attitudes of the homemaker, family decisions, relative interaction, and interaction outside of the family.

Rickenberg, Mary Jean
Ohio State University, Columbus, OH 43210

Child-Rearing Attitudes: Differences Between Rural and

Urban White Low-Income Mothers. Unpublished M.S. thesis. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1973.

RURAL AND urban maternal child-rearing attitudes were correlated with (1) age of children, (2) mother's age, (3) sex of children, (4) childhood residence of the mother, (5) amount of time the mother works outside the home, (6) presence or absence of father in the home, (7) educational level of the mother, (8) type of dwelling in which the family lives, and (9) ownership or rental of the home. Mothers who were renting homes were significantly more authoritarian. Hostility-rejection attitudes were higher for mothers living in single-family dwellings.

Rico-Velasco, Jesus
Phillips, G. Howard
Ohio State University, Columbus, OH 43210

Changing Population in Rural Ohio. Ohio Report 57(3): 45-47. Ohio Agricultural Research and Development Center--Wooster. May-June 1972.

THIS STUDY was initiated to learn more about the values and characteristics of the approximately 1.7 million nonfarm Ohioans living in the open country. Two stratified random samples were drawn and combined to constitute the sample of population. A questionnaire was developed and mailed to a sample of randomly selected Ohio Farm Bureau associate members. Findings indicate that people move to a home in the open country because: they prefer the country environment (particularly uncongested atmosphere); better than three out of four were reared in the country as a child; things they liked about open country living included peace and quiet, less pollution, uncongested, open space, and privacy; they disliked the inconvenience involved in getting to and from services, employment, and schools; and the poor quality of those services which are available.

Robertson, Margaret D.
University of Illinois, Urbana, IL 61801

Housing Choices of Fifty-two Families in Two Price Ranges. Home Economics Research Abstracts 1972. Family

Economics and Home Management Dept. American Home Economics Assoc. p. 22.

THIS STUDY investigates the financial, location, and space housing choices of the family and determines the relative importance to the family of financially related aspects, demographic characteristics, and participation in activities on these choices. The sample included 52 urban families, stratified on the basis of cost and age of house and number and ages of children. Data were collected in personal interviews using an original questionnaire of the author.

Findings indicate that families living in the lower-cost houses have significantly lower incomes, smaller families, new houses, fewer bathrooms, smaller mortgages, smaller down payments, and higher mortgage-price ratios than families living in the higher-cost houses. In general, the findings indicate that for both cost of house groups, financially related considerations, demographic characteristics, and family needs and activities are moderately to somewhat important in financial, location, and space housing choices. Cost of house groups differed more on degree of importance attached to zoning and building restriction considerations and, to a lesser extent, to nuisance minimizing considerations than to any of the other considerations. Findings indicate that housing considerations studied are equally important to families regardless of price paid for their houses, and other factors, in addition to cost of house, may be needed to explain the importance of housing considerations to the homeowner.

Rudd, Nancy M.

University of Illinois, Urbana, IL 61801

A Statistical and Theoretical Analysis of the Role of Wealth and Debt in the Aggregate Saving Function. Home Economics Research Abstracts 1972. Family Economics-Home Management Dept. American Home Economics Assoc. p. 16.

ANNUAL TIME series data for the years 1929-68 (excluding 1941-45) and linear multivariate regression analysis were used to determine the role of eight stocks of wealth, four rates of return to wealth, two stocks of debt, and two interest rates on debt in determining changes in annual, aggregate household saving. The model was based on the assumption that

households attempt to maintain an equilibrium ratio of net worth to income and that the net effect of their attempts is an aggregate equilibrium net worth-income ratio. It was hypothesized that aggregate saving will shift upward or downward if this ratio deviates from equilibrium; i.e., that wealth is negatively and debt positively related to changes in savings, and that different types of wealth vary directly in their importance in the adjustment process with their liquidity or ease of conversion to other asset forms. On the basis of initial regression results, several variables were dropped from the analysis and several others were combined. Regression results for the final model were, in general, consistent with the hypotheses. Further analysis indicated that a model containing a number of separate wealth and debt variables may produce more accurate predictions of future changes in saving than models with only one wealth term, such as net worth.

 Dunsing, Marilyn M.
 University of Illinois, Urbana, IL 61801

A Three-Pronged Look at Family Saving. Journal of Consumer Affairs 6 (1): 35-44. 1972.

Sampson, Joan M.
 University of Illinois, Urbana, IL 61801

Determinants of the Employment Status of the Wife-Mother. Home Economics Research Abstracts 1972. Family Economics-Home Management Dept. American Home Economics Assoc. p. 23.

TO DETERMINE the relative importance of specific sociological, economic, and psychological variables in explaining employment status of the wife-mother was the purpose of this study. Data were available for two urban samples; one sample consisted of 488 nuclear families stratified by husband's occupation and employment status of the wife, and the second sample consisted of 191 nuclear families selected from areas designated as low income. The final regression, which included 23 variables, resulted from the process of successive elimination.

The findings indicate that variables other than socioeconomic, which have been used almost exclusively in other investigations of this topic, are important in explaining employment status of the wife-mother. In terms of beta coefficients, the husband's feelings about the wife working was the most important determinant of employment status. The adjusted coefficients of multiple determination were .35 and .27 for the large and small samples, respectively, indicating that the methodological approach was successful in determining relative importance of variables. In addition, the regression model predicted employment status correctly for 78 percent of the wives in the large sample and for 76 percent of the wives in the small sample.

Satterlee, James L.
South Dakota State University, Brookings, SD 57006

Characteristics of Low-Income Families in Eastern South Dakota: An Examination of the Culture of Poverty Concept. Unpublished Ph.D. dissertation. Rural Sociology Dept. South Dakota State University. May 1970.

CHARACTERISTICS of a sample of 120 low-income families receiving USDA food commodities in three eastern South Dakota counties are studied. The objectives of the study are: (1) to provide a sociodemographic overview of the characteristics possessed by these families; (2) to test the applicability of the Culture of Poverty approach for classifying rural, low-income families; (3) to construct a typology designed to better understand the heterogeneity exhibited among low-income rural families; and (4) to present the implications of the study for policy making, program planning, and research.

Findings on the first objective show the average age of household head to be 46 years, an average education of 9 years, employed full-time primarily as farm managers and laborers, and a family size of 6 persons. Residential and occupational mobility findings reflect few moves. Average income for the families is \$2,300 per year. Findings relating to health indicate over one-third of the households to be experiencing a serious illness with an average annual medical cost for the families to be \$385. Level of living characteristics of the families indicate poor housing and facilities to be common. Lack of contact with mass media and low participation outside the home reflect isolation. The above findings are also presented for the farm and nonfarm segments.

The finding on the second objective of the study is that the 14 characteristics assigned the poor by the proponents of the Culture of Poverty concept are not distributed homogeneously throughout the sample. Only 29 families possess over half of the characteristics with no families possessing all.

Three poverty types are delineated on the basis of the extent to which they possess Culture of Poverty characteristics. Chi-square tests for association between the poverty types and selected characteristics indicate a significant association for education, occupation, extent of unemployment, occupational and residential mobility, socioeconomic and health status, anomie, isolation, organization participation, family stability, and attitudes toward education. Characteristics not significantly associated are income differences, birthplace, age and sex of household head, and size of family.

The fourth objective is accomplished by presenting the implications for policy making, program planning, and research based on the findings of the first three objectives. The need for considering differences among various types of low-income families in program planning as well as a further refinement of the measures used in the study are stressed.

South Dakota State University, Brookings, SD 57006

Poverty in Affluence. Farm and Home Research, 11(3).
Summer 1970.

South Dakota State University, Brookings, SD 57006

Preliminary Descriptive Data, Poverty Project 529.
Dept. of Sociology Pamphlet. South Dakota State University. No to be used without permission.

A COMPILATION of tables presenting basic data resulting from the study of 120 poverty families is contained in this publication. No analysis is attempted in this publication. Certain data refer to such characteristics as residency, employment, health, family stability, level of living, isolation, and anomie.

 South Dakota State University, Brookings, SD 57006

Rural Poverty in Three Eastern South Dakota Counties.
 South Dakota Agr. Exp. Sta. Bul. No. 602. Dept. of
 Rural Sociology, South Dakota State University. Oct.
 1972.

CHARACTERISTICS of a sample of 120 low-income families receiving USDA food commodities in three eastern South Dakota counties are included in this bulletin. The objectives of the study, based on research conducted for a doctoral dissertation, are: (1) to provide a sociodemographic overview of the characteristics possessed by these families; (2) to test the applicability of the Culture of Poverty approach for classifying rural, low-income families; (3) to construct a typology designed to better understand the heterogeneity exhibited among low-income rural families; and (4) to present the implications of the study for policy making, program planning, and research.

 South Dakota State University, Brookings, SD 57006

South Dakota Poverty Data. South Dakota Coop. Ext.
 Serv. PS 577. Fall 1972.

A COMPILATION of census data pertaining specifically to South Dakota poverty is contained in this publication and focuses on a contrast of total characteristics of the population to those of the poverty segment. Data is presented by state, county, and communities, with contrasts of such characteristics as families in poverty, income, age, unemployment, public assistance, and number of children.

Schmitt, Bonnie Jean S.
 Iowa State University, Ames, IA 50010

Family Attributes Characteristic of Income Deprivation.
 Unpublished M.S. thesis. Family Environment Dept.

Iowa State University. 1973.

DATA FOR this study were selected from those available from Iowa projects 1726 and 1737, both contributing to inter-regional project NC-90 on "Factors Related to Patterns of Living of Disadvantaged Families." Basic objectives were to (1) compare the extent to which three different measures of low-income identify families consistently as deprived, and (2) determine common and distinctive characteristics of the families defined as deprived by the three measures. These measures were: a budget-oriented approach (NC-90 index of income adequacy, considering size and composition of the family); a comparative income approach recommended by Fuchs (families below half the community median income); and a population quintile-share approach (poorest fifth of the population). Each of these measures of income deprivation was examined in relation to 21 family attributes.

Attributes of the deprived, as identified by all three measures, were: relatively large family size, comparatively low marital satisfaction, interest in concrete rewards for employment, comparatively low housing quality, and perceptions that money income was inadequate. Low community participation was a unique attribute of families identified as deprived by the quintile and the Fuch criteria but not by the NC-90 income index. Attributes distinctive of the deprived by a single measure were: respondent's job pessimism and perception of family situational mobility (NC-90 income index); family cohesiveness, child rearing, and anomia (Fuchs criterion); and earning level of respondent (quintile measure). Only 11 of the 179 families were identified consistently as deprived by all three measures.

Schnittgrund, Karen P.
Dunsing, Marilyn M.
Hafstrom, Jeanne L.
University of Illinois, Urbana, IL 61801

Children and Money... Attitudes and Behavior of 52
Grandparent and Parent Families. Illinois Research
15(2): 12-13. 1973.

THE OBJECTIVES of the work were to determine if parents' money management practices with their children tend to be like the practices of their parents with them, to report similarities and differences between parents' and

grandparents' attitudes about money, and to find out whether one parent tends to have more influence than the other on the money management practices they follow with their children. A sample of 26 parents and 26 grandparents in the small town of Marshall in central Illinois was used for a pilot study. Information was collected by the interview-questionnaire method.

In general, grandparents and their sons and daughters had similar attitudes on major issues covered in this study. There was also a tendency for the parents to treat their children as they themselves had been treated. On such items as allowances and financial plans for education after high school, fewer parents had them than were providing them for their children. Generally the grandparents' sons and daughters and their spouses had similar attitudes. However, the sons and daughters were more likely than the spouses to feel that they had had everything they wanted as children. The actual practices followed by the grandparent and parent families were not always the same as their expressed attitudes.

Schriner, Eldon C.
Ohio State University, Columbus, OH 43210

The Family Social Network and Parental Encouragement for Higher Education. Unpublished Ph.D. dissertation. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1971.

THE PRIMARY objective of the study was based on the notion that parental behavior, in regard to encouraging the child's higher education, is related to the nature of the social milieu in which parents are immersed. This social environment was conceptualized as the family social network made up of the family's closest and most intimate associates, friends, and neighbors. The analysis indicated no consistent relationship between the social milieu characteristics and level of encouragement given to males. While the degree of association between the social environment characteristics and level of encouragement given to females was low, there was a consistent pattern of families in high socioeconomic status social networks (friends and neighbors with higher educational and occupational attainments) providing greater encouragement for their daughters than parents with similar characteristics but associating in lower status social networks.

Smith, Christopher L.
South Dakota State University, Brookings, SD 57006

Characteristics of Low Income Families in the Head Start Program in Three Eastern South Dakota Counties. Unpublished M.S. thesis. Rural Sociology Dept. South Dakota State University. July 1970.

THIS STUDY was designed to seek out characteristics of Head Start Families in a rural setting. Beyond this objective an attempt was made to contrast those characteristics to the population in general as well as to those characteristics often attributed to poverty families. A sample of 44 Head Start families defined by federal guidelines as poverty stricken were selected in a three-county South Dakota area. Such variables as size of family, family isolation, sex of household head, employment characteristics, knowledge of Head Start objectives, age of parents, education, anomie, and present-future orientation were used.

The findings of the study reflected average income at \$3,000 per year, nonfarm residents with a low degree of social isolation, a high degree of family stability, primarily male household heads, an average family size of eight persons, low levels of education, favorable attitudes toward education, and a low level of anomie. Implications of the study indicate that due to age of household head and average income, programs must be designed which would take into consideration already large family size and the potential for even greater increases within each family. Findings which demonstrate few typical poverty characteristics, such as unemployment, anomie, etc., may demand a new look at rural versus urban poverty programs.

Riley, Marvin P.
South Dakota State University, Brookings, SD 57006

Families of Children in the Head Start Program. South Dakota Farm and Home Research 12(1). Winter 1971.

THIS ARTICLE is based on research conducted for the author's M.S. thesis. The study was designed to seek out

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characteristics of Head Start Families in a rural setting and to contrast those characteristics to population in general as well as to those characteristics often attributed to poverty families. A sample of 44 Head Start families defined by federal guidelines as poverty stricken were selected in a three-county South Dakota area. Such variables as size of family, family isolation, sex of household head, employment characteristics, knowledge of Head Start objectives, age of parents, education, anomie, and present-future orientation were used.

The findings of the study reflected average income at \$3,000 per year, nonfarm residents with a low degree of social isolation, a high degree of family stability, primarily male household heads, an average family size of eight persons, low levels of education, favorable attitudes toward education, and a low level of anomie. Implications of the study indicate that due to age of household head and average income, programs must be designed which would take into consideration already large family size and the potential for even greater increases within each family. Findings which demonstrate few typical poverty characteristics, such as unemployment, anomie, etc., may demand a new look at rural versus urban poverty programs.

Sriranlu, Uma
Iowa State University, Ames, IA 50010

Socioeconomic Level Related to Orientations to Life of Mothers in Small Towns of Southwest Iowa. Unpublished Ph.D. dissertation. Family Environment Dept. Iowa STATE University. 1973.

THE OBJECTIVES OF THE STUDY WERE TO (1) develop indicants and measures of socioeconomic level and orientations to life of the mothers, (2) determine associations between socioeconomic levels of families and the mothers' orientations to life, (3) investigate the degree of relationship between socioeconomic level and orientations to life when controlling for four demographic characteristics, and (4) prepare recommendations for adult education in home economics as well as for further research on measurement of the basic variables. Data were from interviews of 179 female homemakers under 65 years of age with one or more children under age 18 living at home. Respondents represented a random sample of households in eight randomly selected towns of 1,000 to 2,500 population in southwest Iowa.

Based on standard scores, a composite scale of socioeconomic level was developed with a coefficient alpha of 0.72. Components of the scale were disposable money income, occupational type of main earner, mean years of formal education of husband and wife, overall housing quality as assessed by the interviewer, and community participation by husband and/or wife. As family socioeconomic levels (Sel) were higher, the more often mothers tended to view their families as cohesive, express greater marital satisfaction, be permissive in child-rearing practices, appraise their communities favorably, and respect sources of help with children's problems. They less often were anomic, were less interested in vertical mobility, and valued concrete rewards for employment and other aspects of life less than did other mothers.

St. John, Nancy

Mothers and Children: Congruence and Optimism of School Related Attitudes. Journal of Marriage and Family 34(3): 422-430. 1972.

Streissguth, A.P.
Bee, H.L.

Mother-Child Interactions and Cognitive Development in Children. Young Children 21: 154-173. 1972.

Thee, Robert J.
Iowa State University, Ames, IA 50010

Approaches to Measurement of Housing Environments in Rural Nonfarm Communities. Unpublished M.S. thesis. Family Environment Dept. Iowa State University. 1973.

THE PURPOSE of this work was to develop a personal interview survey instrument for use as a counterpart to consumer surveys aimed toward assessing housing environments in rural nonfarm communities. Specifically, the instrument was developed to ascertain ways in which major participants in the community's housing process view the housing situation in their respective communities. Major participants were identified as business firms, government officials, and

facilitating agencies and organizations, as well as household consumers and producers of housing. Conceptual backgrounds for developing the instrument were oriented mainly to family housing as and in environment, and to housing as a facet of rural community development. Data from the 1970 Census of Housing and Population, and from surveys for Iowa Projects 1726 and 1737, were used to identify characteristics of families with children in small towns of southwest Iowa and of the dwellings they occupy. These data and their significant relationships, along with instruments used in several other housing surveys, were used to develop the content and structure of preliminary instruments to interview realtors, bankers, and saving and loan administrators, suppliers of materials and related services, service and repair technicians, and leaders of voluntary organizations.

Thibeault, R.W.
Kaiser, E.J.
Butler, E.W.
McAllister, R.J.
University of Nebraska, Lincoln, NE 68503

Accessibility Satisfaction, Income and Residential Mobility. Traffic Quarterly 22: 289-306. April 1973.

Vartuli, Sue Ann
Ohio State University, Columbus, OH 43210

Parental Child-Rearing Information Needs Perceived by Parents and Teachers of Young Children in Low-Income, Low-Density Ohio Counties. Unpublished M.S. thesis. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1972.

A "CHECKLIST of Needed Child Care Information" was developed and mailed to 200 mothers, 205 fathers, and 98 preschool teachers to determine perceptions of needed parental child rearing information. There were 35 percent returned. Responses of parents and teachers differed significantly, the teachers feeling parents needed more information than parents felt they needed. Mothers were most desirous of information on "sexual growth of children," fathers, on "setting rules and regulations," teachers, on "parents talking to their preschool age child" and "learning about nursery school." Responses of parents with a child in a group care program did

not differ significantly from responses of parents who kept their child at home.

Weltner, Nadine D.
Ohio State University, Columbus, OH 43210

Mothers' and Children's Perceptions of Maternal Reward Orientations and Their Relationship to School Success: A Low-Income, Urban-Rural Comparison. Unpublished M.S. thesis. Ohio Agricultural Research and Development Center--Wooster. Ohio State University. 1973.

THE STUDY compared urban and rural mothers' and children's perception of maternal reward orientations and their effects on children's school success. No significant relationships were found between urban mothers' and children's perceptions. Children's perceptions were related to their school success. Rural subjects matched more frequently on perceptions than did urban subjects. No significant relationships were found between the effects of urban subjects' perceptions on school success and the effects of rural subjects' perceptions on school success.

West, Janet L.
Iowa State University, Ames, IA 50010

Human Resources of Women in Voluntary Community Activities. Unpublished M.S. thesis. Family Environment Dept. Iowa State University. 1969.

THIS STUDY was the first of a series to develop measures of human resources other than physical health, formal education, and technical skills applicable to women engaged in services to their families, employed for pay, or involved in community activities. A mail questionnaire was developed and pretested with 18 women of the Ames community who were active in different types of organizations. After revisions, it consisted of sets of polar descriptions for 43 attributes and 10 paired-comparison sets for 5 attributes which had been rated consistently high by the pretest respondents. Instructions, a form for demographic information, and a check list of organizations in which the respondent had been active during the past year were also included. Questionnaires were sent to 400 women selected from approximately 2,500 who had

been identified by the Iowa Cooperative Extension Services as community leaders in rural and urban areas. An 82 percent return was received. Items were evaluated by several techniques, and hypotheses were tested concerning differences in attributes considered desirable for membership in various kinds of organizations. Cluster analysis identified five attributes as desirable human resources of women for community activities: ego-strength, thoroughness, nurturance, management, and inventiveness.

Woodward, John C.
 Visser, Mary Jane
 University of Nebraska, Lincoln, NE 68503

Another Life Style. Farm, Ranch and Home Quarterly.
 Summer 1973.

THE PHYSICAL environment of rural, small town families within a 50-mile radius of Lincoln, Nebraska, was studied. The environment of these 209 white rural households may be described as follows: A typical family consists of a homemaker and her spouse 25-45 years of age with 3 or more children, the oldest child being 12 to 18 years old. The parents have completed high school. The husband is employed full time, the homemaker engaged in full-time homemaking but considered full- or part-time employment. The living circumstances observed identified a wide range of conditions of living. However, most were living in what would be labeled a moderate circumstance, with the majority satisfied with the housing situation.

Zwaagstra, Atje (Pat)
 Purdue University, West Lafayette, IN 47907

Factors Related to Family Financial Problems and Perceived Adequacy of Income. Home Economics Research Abstracts 1971. Family Economics-Home Management Dept. American Home Economics Assoc. 1971. p. 17.

THIS STUDY investigated income dependability and economic position as related to eleven family financial problems and perceived adequacy of income. A sample of 363 families from Indiana and Ohio, living in areas designated as poverty neighborhoods, was investigated. The following relationships

were examined: perceived income adequacy to economic position; income dependability with perceptions of adequacy and economic position; and financial problems to economic position, income dependability, and perceptions of income adequacy.

Fifteen families had incomes assessed as undependable, 216 as fluctuating, and 130 as steady. When described by economic position, families in poverty numbered 84, near poverty 41, above poverty 108, and near affluence 102. Most families perceived their incomes as being "adequate to afford some of the things wanted, but not all." For seven of the problems, those who "never" had them had a mean economic position index close to or over the figure designated as the near affluent group. The lower a family's economic position, the more frequently and intensely they were to experience any of the problems investigated.

VII. GROUP AND COMMUNITY DECISION MAKING

Barker, Roger
 Schoggen, Phil
 University of Nebraska, Lincoln, NE 68503

Qualities of Community Life. Jossey Bass. San Francisco, CA. 1973.

Beck, E.M.
 University of Michigan, Ann Arbor, MI 48104

A Canonical Approach to Assessing Occupational Mobility Matrices. Social Science Research 2(3). Sept. 1973.

THIS PAPER develops a summary measure of occupational persistence which does not require translating the occupational categories into status scale scores. The measure is based on the mean of the squared canonical correlations extracted from a general mobility matrix. The procedure is employed to assess the impact of rapid regional economic diversification on the movement of labor within the occupational structure.

University of Michigan, Ann Arbor, MI 48104

Effects of Time on the Relationship Between Status of First Occupation and Current Occupational Status. Working Paper RID 73.2. Center of Applied Sociology. University of Wisconsin. Jan. 1973.

SEVERAL empirical studies of the status attainment process have demonstrated that the influence of first occupation on current status decays as the time in the labor force advances. In this study three mutually exclusive models to ac-

count for this phenomenon are postulated. Using synthetic cohort data from 834 employed nonfarm males, strong support was found for the proposition: the importance of the initial entry point in the labor force on current occupational status decreases as the length of time spent in the labor force increases, and the rate of this loss increases with time.

Dotson, Louis

Summers, Gene F.

University of Colorado, Boulder, CO 80302

University of Tennessee, Knoxville, TN 37901

University of Wisconsin, Madison, WI 53706, respectively.

Effects of Industrial Development on Heads of Households. Growth and Change. University of Kentucky. July 1973. pp. 16-19.

MUCH theoretical and empirical attention has been directed toward assessing the impact of industrial inputs upon the population of a developing region. These studies have focused on various specific effects of development: changes in the occupational structure, occupational mobility, attitude change, economic growth, and population redistribution, as well as the more generalized responses of communities to industrial development.

Consistent with this contemporary research on community responses to development, this report examines short-term changes in the socioeconomic characteristics of heads of households during a period of industrial development in a rural area of the Midwest.

Summers, Gene F.

University of Michigan, Ann Arbor, MI 48104

University of Wisconsin, Madison, WI 53706

Industrial Development and Changes in Occupational Structures. Working Paper RID 73.11. Center of Applied Sociology. University of Wisconsin. 1973.

INDUSTRIAL development affects many different aspects of social structures, and one of the most sensitive to change of these structural components is the occupational structure. It is argued in this paper that it is possible to assess the impact of industrial development by investigating changes in market participation, sectoral relocation, work specialization, occupational upgrading, and the bureaucratization of work, as well as changes in the distribution of labor over occupational categories.

Clémente, Frank
University of Wisconsin, Madison, WI 53706

Effects of Industrial Development on Heads of Households: Comment. Growth and Change. University of Kentucky. Vol. 4, pp. 20-21. July 1973.

THIS ARTICLE comments on a study of before-and-after survey analysis of the socioeconomic consequences of rural industrial development in the United States.

Rojek, Dean
Beck, E.M.
University of Wisconsin, Madison, WI 53706
University of Wisconsin, Madison, WI 53706
University of Colorado, Boulder, CO 80302, respectively

Trade Patterns and Community Identity: Five Years Later. Working Paper RID 73.8. Center of Applied Sociology. University of Wisconsin. Rural Sociology. Vol. 29, pp. 92-95. Spring 1974.

RESEARCH employs longitudinal data to ascertain the extent to which the relationship between the locus of economic activity and community of identification is diminishing over time. In addition, it investigates the impact of industrial development upon the relationship.

Summers, Gene F.
 Pennsylvania State University, University Park, PA
 16802
 University of Wisconsin, Madison, WI 53706

Age and the Journey to Work. Working Paper RID 73.13.
 Center of Applied Sociology. University of Wisconsin.
Gernotologist Vol. 14. June 1974.

AN HYPOTHESIS suggesting an inverse association between age and distance traveled to work was tested by correlation analysis. The results indicated no support for the expected linear relationship between age and distance commuted. This finding runs counter to the well-documented inverse relationship between age and other dimensions of geographic mobility. Several possible reasons for the failure of age to emerge as a predictor of distance traveled to work are suggested and briefly discussed.

Summers, Gene F.
 University of Wisconsin, Madison, WI 53706

A Comment on Palmore and Whittington's Relative Status of the Aged. Social Forces. Vol. 51. June 1973.

IN A RECENT ARTICLE, Palmore and Whittington (1971) employed U.S. Census data to examine the relative status of the aged during the period 1940-69. One finding, a "large and steadily widening gap between the aged and non-aged," must be questioned, for the measure they used--gross income--may have led them to an overly pessimistic conclusion. Failing to take family size into consideration when comparing the economic status of age groups may lead to false conclusions.

This article takes issue with their findings by studying data from a longitudinal analysis of the industrial structure of six Illinois counties. The population sampled is a microcosm of the Midwest. Since most of the respondents reside in an area which underwent substantial industrial development during the study period (1966-71), the data provided a useful test of one of Palmore and Whittington's conclu-

sions, i.e., the status of the aged declines with industrialization.

The major implication derived from the Illinois data is that conclusions regarding the relative economic status of the aged should be based on analyses which standardize income by size of household. When this indicator of economic status was employed, the gap between the age groups was substantially less than when gross income was used.

Summers, Gene F.
University of Wisconsin, Madison, WI 53706

Industrial Development and the Elderly: A Longitudinal Analysis. Journal of Gerontology 28(4): 479-483. 1973.

THE IMPACT of industrial development in nonmetropolitan regions upon the economic status of the aged is analyzed via a natural field experiment with a "two group, before and after" design. Data from a five-year study (1966-1971) of the construction of a large manufacturing facility in rural Illinois are compared to parallel data from a control region across the state. The findings suggest that industrial development accelerates the decline in the economic status of the elderly--especially retirees. These results augur ill for the financial well-being of the aged residents of the many small communities actively seeking large industry.

Summers, Gene F.
University of Wisconsin, Madison, WI 53706

Large Industries in Small Towns: Who Benefits? Working Paper RID 73.9. Center of Applied Sociology. University of Wisconsin. Feb. 1973.

THIS STUDY explores the impact of a large manufacturing plant upon a small village in "middle America." The analysis yields evidence of the effect of industrial development upon various segments of the population: (1) The construction of a large steel mill in rural Illinois substantially increased the median income of household heads in the area. (2) These increases were quite unevenly distributed throughout the pop-

ulation. (3) This unequal distribution of benefits placed large segments of the population, i.e., the aged and females, in relatively poorer positions than they occupied prior to the development of the plant. The implications of these results are considered in the report.

Summers, Gene P.
 Pennsylvania State University, University Park, PA
 16802
 University of Wisconsin, Madison, WI 53706

Working Paper RID 73.15. Center of Applied Sociology.
 University of Wisconsin. Aug. 1973.

THIS STUDY reports data on the commuting patterns of the employees of a recently constructed manufacturing facility in north central Illinois. The specific purposes of the research are (1) to add to the general data bank on nonmetropolitan commuting and (2) to specifically describe emergent commuting patterns in an industrializing rural area.

Evers, Frederick T.
 Warren, Richard D.
 Rogers, David L.
 Iowa State University, Ames, IA 50010

Organization Goals of Farm Supply Cooperatives in Iowa.
 Res. Mono. No. 108. Dept. of Sociology and
 Anthropology. Iowa State University. 1973.

THIS monograph is based primarily on a thesis prepared by Frederick T. Evers, "Organizational Goal Identification: Some Alternative Techniques."

Two organizational goal models were developed and applied to the 153 cooperatives. Statistical techniques of block-design analysis of variance, factor analysis, and Pearsonian correlation were used to examine the relationships of the goal scores in both models and between the models. The goal of efficiency was found to be paramount to the cooperative managers in both models.

Folse, Clinton L.
 Haga, William J.
 University of Illinois, Urbana, IL 61801

Trade Patterns and Community Identity. Rural Sociology
 36(1): 42-51. March 1971.

A STUDY of 252 heads of rural households supports Munch and Campbell's contention that functional interaction alone is inadequate to explain identification with community. Account must also be taken of the affectual process in identification. The Galpin-Kolb model of essentially economic delineation of community boundaries was not supported. Distance was found to be the most reliable predictor of community identity patterns following the Loschian principle of spatial competition. A concluding argument is made for viewing community identity as a symbolic process involved in the development of self.

Heffernan, William D.
 University of Missouri, Columbia, MO 65201

Sociological Dimensions of Agricultural Structures in the United States. Sociologia Ruralis, Journal of the European Society for Rural Sociology 12(3/4): 482-499. Proceedings, Third World Congress for Rural Sociology. Baton Rouge, LA. Aug. 22-27, 1972.

THIS STUDY is designed to examine the relationship between agricultural structures and community involvement. A sample of 45 workers (farmers) from the "family-farm open market" type of agricultural structure, 49 workers (growers) from the "corporate-integratee" type, and 85 workers and 28 managers or owner-operators from large scale or "corporate-farm hand" type of agricultural structures were interviewed. The findings suggest that workers in corporate-farmhand structures are much less involved in formal participation and political activities, and the owners or managers are much more involved in these activities than are those working in the family-farm structure. Little difference was found between workers in the corporate-integratee structure and the family-farm structure.

Hitchcock, J.R.
University of Nebraska, Lincoln; NE 68503

Daily Activity Patterns: An Exploratory Study.
Ekistics 34: 323-327. 1972.

Hough, Richard L.
Summers, Gene F.
O'Heara, James
University of Illinois, Urbana, IL 61801

Parental Influence, Youth Contraculture, and Rural
Adolescent Attitudes Toward Minority Groups. Rural So-
ciology 34(3): 383-386. Sept. 1969.

THE DECLINE in number of functions performed by rural families and the rise in extended education of rural youth at consolidated schools would seem to offer the conditions for the development of a youth subculture. Such a youth subculture may be termed a "contraculture" insofar as it supports attitudes contrary to those of the adult culture. An attempt to ascertain whether there is evidence of an emerging youth contraculture in a rural midwestern area is reported in this article.

Kaldor, Donald
Iowa State University, Ames, IA 50010

Rural Industrialization: A Policy Instrument for Rural Development. In Focus on Iowa: Rural Community Development Seminar. Center for Agricultural and Rural Development. Iowa State University. June 1972.

THIS REPORT considers some of the major potential benefits and costs of industrial expansion in rural communities. The interest and action in industrialization in Iowa's rural communities are discussed, and the future of Iowa industrialization is analyzed.

Dahkle, Mike

Iowa State University, Ames, IA 50010
Northern Natural Gas Company, Omaha, NE

Industrialization Efforts and Experiences in Iowa's Rural Communities. Center for Agricultural and Rural Development. Iowa State University. Jan. 1973.

THE IOWA Agricultural and Home Economics Experiment Station studied industrialization efforts and experiences in Iowa's rural communities in 1971. Through the cooperation of the Iowa Development Commission, the Iowa Chamber of Commerce, and local industrial development leaders, a survey was made in all Iowa cities and towns with 1970 populations of 1,600 to 8,500 and located more than 20 miles from a metropolitan center. Data were collected by personal interviews with local industrial development leaders. This pamphlet summarizes some of the findings.

Kayser, Brian D.

Summers, Gene F.

University of Minnesota, St. Paul, MN 50510

University of Wisconsin, Madison, WI 53706

The Adequacy of Student Reports of Parental SES Characteristics. Sociological Methods and Research 1(3): 303-315. Feb. 1973.

IN THIS study, the reliability and validity of student reports of parental SES characteristics were investigated. Using panel data for student reports and independent surveys of both mothers and fathers, it was found that student reports were relatively stable over time and were more reliably measured for parental education than for either father's income or occupation. The validities of the reports were, for all but income reports, moderate. The validity of income reports was very low. It was concluded that student reports should be utilized with some caution, and, where possible, direct measures of parental SES should be used.

Napier, Ted L.
Ohio State University, Columbus, OH 43210

Social-Psychological Response to Forced Relocation Due to Watershed Development. Water Resources Bulletin 18(4): 784-794. Aug. 1972.

CONSTRUCTION on water impoundment projects often necessitates relocation of numerous rural residents which can result in social disruption of established interaction patterns within affected groups. A research study was conducted within two communities in West Virginia and two communities in Ohio which had recently been subjected to watershed development. The objective of the research was to evaluate the social-psychological response of local residents to the forced relocation and subsequent disruptive effects of the resettlement. The dependent variable used in the research was community alienation. The findings revealed that the affected community groups were not significantly different in terms of alienation from the nonaffected base groups. This finding suggests that forced relocation did not consistently lead to personal alienation from the changed community. It was noted, however, that negative attitudes were identifiable among the affected community members, but the negative comments appeared to be directed toward the change agency and toward physical relocation rather than the community per se.

Ohio State University, Columbus, OH 43210

Water for the Future. Ohio Report 58(2): 57-59. March-April 1973.

WATER resource development often necessitates relocation of numerous long-term residents which poses unique developmental consequences for the directly affected group members. A study was organized to explore the perceptions that people have toward their changing community as a function of exogenous developmental activity. The findings revealed that the affected community groups were not significantly different from nonaffected community groups in terms of alienation from their community. The findings revealed that all groups studied were basically quite integrated (op-

posite of alienated) into their community. Negativistic attitudes toward the watershed development were noted, but the negative attitudes appeared to be directed toward the change agent and physical relocation rather than the changing social relationships within the group.

Harler, Curtis

Ohio State University, Columbus, OH

Utilization of Information Sources by a Rural Community Group. Economic Information for Ohio Agriculture. No. 542. pp. 3-4. April 1973.

A SURVEY research was conducted in a rural farming community in central Ohio to determine the community members' primary sources of information. The theoretical hypothesis tested was that the mass media would contain the most important sources of information. The findings overwhelmingly supported the theoretical hypothesis posited. Person-to-person exchange of information played a relatively minor role in the diffusion of information. Radio, television, and newspapers constituted the most frequently utilized resources of information.

Wright, Cathy J.

Ohio State University, Columbus, OH 43210

Differential Acceptance of Change: Implications for Rural Development Programs. Ohio Report 57(6): 83-85. Nov.-Dec. 1972.

TECHNICAL change has been rapidly diffused throughout the American society, and the elaboration of technology has become the "accepted" norm. Sociological changes, however, have tended to "lag" behind the technological changes. A study was organized to determine the attitudes of rural farming people toward sociological and technological change in terms of willingness to accept the various types of changes. The findings validated the theoretical model that social changes would be resisted more vigorously than technological changes. Few of the technological change factors used in the study would be resisted with the community

analyzed while numerous sociological changes would be resisted.

Cathy J.
Ohio State University, Columbus, OH 43210

An Evaluation of Forced Relocation of Population Due to Rural Community Development. ESS 500. Dept. of Agricultural Economics and Rural Sociology. Ohio State University. Nov. 1973.

THE STUDY consisted of a social-psychological analysis of a rural farming community in central Ohio which had been disrupted as a result of a large-scale rural development project. A quasi-experimental design was employed to determine if the affected group differed significantly from a nonaffected community group with similar characteristics. The findings revealed that the commonly held position that forced relocation of population will result in the fragmentation of the predevelopment community situation was not supported. The experimental (affected) group was basically: not alienated from their community group; marginally satisfied with the services in this changed community; highly committed to education; physically immobile; modernistic relative to change; and highly identified with their community. The findings revealed that the affected group was very negativistic about land acquisition for rural developmental projects and held negative attitudes about various aspects of the developmental project. The findings suggest that land procurement policies and developmental implementation programs should be carefully reviewed from a more humanistic perspective.

Nelson, Merwyn
Franz, Verl R.
Marshall, Douglas G.
University of Wisconsin, Madison, WI 53706

Correlates of Involvement for Community Action in a Small Industrial Town. Paper presented at the annual meeting of the Rural Sociological Society. Boston, MA. Dept. of Rural Sociology. University of Wisconsin. 1968.

North Central Regional Center for Rural Development
Iowa State University, Ames, IA 50010

Communities Left Behind: Alternatives for Development.
Ames: Iowa State University Press. 1974.

EXAMINES rural community decay and proposes possible solutions for restoring equity in the distribution of costs and benefits from ongoing national growth and technological change.

Rogers, David L.
Iowa State University, Ames, IA 50010

Organizational Prestige: A Comparative Study of Organizational Evaluation. Unpublished manuscript. Sociology Dept. Iowa State University. 1972.

THE CORRELATES of organizational prestige were examined in the study of 110 public agencies. Agency administrators ranked other organizations in their county in terms of each unit's prestige or image. Prestige ratings were related in a positive direction to the level of organizational resources and support given by other units in the organization set. Only two types of services provided by an agency (financial assistance and mass media education) were related to its prestige. The strongest relationship identified was between organizational effectiveness and prestige. Organizational longevity related to prestige in a positive direction. Several characteristics of organizational design were related in a negative direction to evaluations given by administrators. These characteristics included horizontal differentiation and local autonomy vis-a-vis higher administrative levels.

Iowa State University, Ames, IA 50010

Towards a Scale of Interorganizational Relations Among Public Agencies. Sociology and Social Research 59: 61-70. Oct. 1974.

THIS PAPER reports the testing of a sequential measure of the intensity of interorganizational relations (IOR). The scale was developed in a community development context involving selected public service agencies. Data for the analysis were obtained from interviews with the top administrator in each of 116 organizations located in 16 different counties in a midwestern state. Questions about the type of contacts between organizations were used to measure the intensity of IOR. Several properties of the scale were presented including its reproducibility, reliability, and validity. The data provide evidence of a sequential pattern occurring among the following indicators of intensity: director acquaintance, director interaction, information exchange, resource exchange, overlapping boards, and written agreements.

Bultena, Gordon L.

Barb, Ken H.

Iowa State University, Ames, IA 50010

Voluntary Association Membership and Political Participation: An Exploration of the Mobilization Hypothesis. Unpublished manuscript. Dept. of Sociology. Iowa State University. 1973.

SURVEY DATA from 390 respondents were analyzed to determine the relative effects of organizational involvement, socioeconomic status, and political attitudes on political participation. Two theoretical perspectives were investigated: mobilization theory and selection theory. Both the mobilization and selection perspectives were supported by the data; however, organizational involvement was shown to explain more of the variance in political participation than did social status and political attitudes. The mobilization perspective was further examined to determine if it worked equally well in all types of organizations. We found that the relationship between organizational involvement and political participation was stronger for "instrumental" than for "expressive" groups and for organizations characterized by high, as compared to low, levels of political discussion.

Glick, Edward L.

Iowa State University, Ames, IA 50010

Planning for Interagency Cooperation in Rural Development. Report No. 45. Center for Agricultural and Rural Development. Iowa State University. 1973.

THE OBJECTIVES of this report were: (1) to ascertain which public and private organizations participate in county-level development programs; (2) to identify the extent of interagency cooperation among these groups; (3) to identify the factors associated with interagency cooperation; and (4) to explore alternatives for increasing cooperation among development groups. Data for the study were obtained from the top administrator in each of 169 public and private development-related organizations located in 16 different counties in Iowa.

Definitions, types of activities, and priorities in rural development tended to reflect organizational goals and purposes. Private groups reported low levels of involvement in development activities, but also reported high levels of commitment for future involvement. Administrators expressed strong verbal commitment to a cooperative interagency approach. On the basis of the data, the authors recommend a comprehensive rather than a categorical approach to rural development, expanding the range of organizations involved to include more of the private sector, and building on the present interagency systems in which some consensus already exists about problems, solutions, and which groups to involve.

Iowa State University, Ames, IA 50010

Sociometric Analysis of Interorganizational Relations: Application of Theory and Measurement. Rural Sociology 39(Winter). In press 1974.

THIS PAPER seeks to improve on the conceptualization and measurement of interorganizational fields and organization-environment relations. Cohesiveness of interorganizational fields and centrality of organizations vis-a-vis other units in their task environments were examined. Matrix algebra and sobiograms were used to analyze data collected through interviews with the top administrator in 159 community development organizations. Cohesion of 16 interorganizational

fields (counties) and centrality of 15 different types of organizations were determined using both high and low intensity of interaction measures. Three organizational coalitions were located and found to group around concerns about agriculture, social services, and natural environment.

Rojek, Dean J.
University of Wisconsin, Madison, WI 53706

The Social and Psychological Consequences of Intragenerational Mobility. Working Paper 73.4. Center for Applied Sociology. University of Wisconsin. Jan. 1973.

THE RELATIONSHIP between prior and present SES and ten symptoms of social and psychological stress were examined for mobility effects. The analysis was confined to a five-year, intragenerational mobility panel from the two regions. The findings provide little, if any, support for suggesting that mobility has disruptive consequences. The use of dummy-variable, additive regression models proved to represent adequately the effects of social stratification, thereby negating the need for any further complicating explanation. The Durkheimian mobility hypothesis pointing to manifestations of anomie, stress, or social isolation were not conclusively evident in the panel under study. These few effects that were detected were not mutually supported in both regions.

Scott, John T., Jr.
University of Illinois, Urbana, IL 61801

Economic Impact of Industrialization on Traditional Rural Areas. Journal of the American Society of Farm Managers and Rural Appraisers 32(2): 8-13. Oct. 1968.

THIS ARTICLE considers some of the ramifications of the economic impact of industrialization on a traditional rural area, with emphasis on the two major areas of concern to farmers: (1) the changes in land use patterns and land values and (2) the effect of wage and labor supply changes on farm organization. Although the initial effect has been on land values, land use will eventually be affected, too. The continually developing longer-run impact will result from the

changes in wage rates and labor supply on the allocation of farm resources and the shift in types of farm production.

University of Illinois, Urbana, IL 61801

Profile Change when Industry Moves into a Rural Area.
Working Paper RID 73.7. Center for Applied Sociology.
University of Wisconsin. Madison. Feb. 1973.

THE REPORT points out that the greatest change to a community profile when industry moves in is in the land use and support systems--reduction of open space and increase in demand on water, energy, and means for both liquid and solid waste disposal. These demands can easily go beyond local tax resources to provide the required services. Other changes affect the labor force, retail sales and services, housing development, and demand for schools and other publicly provided services. The least change in profile occurs when the community profile of resources available most closely matches the industry profile of input demands.

Much of the effort spent by a single small community in attracting new industry, if it is successful, will benefit an area far beyond its own environs. Other than the effects on land use and support systems, the effects of increased employment and other economic activities which accompany new industry will be diffused widely throughout the benefitting area, mainly due to the open country commuting field of up to 40 miles or even more. Community profile assessment and community efforts to attract industry should be pooled and coordinated among all communities in a regional effort, because the costs of an industry moving in may otherwise be borne mainly by one community while the benefits will be spread over a large area.

Chen, C.T.
University of Illinois, Urbana, IL 61801

Expected Changes in Farm Organization when Industry Moves into a Rural Area. Illinois Agricultural Economics. Jan. 1973. pp. 41-47.

FARM organization in an industrializing area is affected mainly by rising labor costs and a reduction of labor supply. Also, in areas where land acquisition for new industry, businesses, and roads is substantial, farm organization may be affected by rising land price and land sales. This article uses two types of linear programming models (separate typical farm models and an aggregate model) to examine these questions. After industrialization, income increases on the smaller farms mainly because the farm family can take off-farm work which is now available at higher wage rates. Income is about the same on medium-sized farms where the family was previously fully and profitably employed. The income falls on larger farms where hired labor is an important input factor. Aggregate farm income rises and the distribution of income is more favorable to the smaller farmer. Livestock production is reduced on both the smaller and larger farms with shifts toward less labor intensive technology when it is available and capital is not restricted.

Seiler, Lauren H.
The City University of New York, NY

Community Power Structures and Methods Artifacts: A Reinterpretation. Working Paper RID 73.1. Center for Applied Sociology. University of Wisconsin. Madison. Jan. 1973.

THREE previously published data sets are used to reconsider whether the reputational method tends to identify pyramidal community power structures or whether the decisional method tends to identify nonpyramidal power structures. The data in no instance suggest that the reputational method tends to identify pyramidal power structures. There is evidence, however, that the decisional method tends to identify nonpyramidal power structures.

Summers, Gene F.
University of Wisconsin, Madison, WI 53706

Large Industry in a Rural Area: Demographic, Economic and Social Impacts. Working Paper RID 73.19. Center of Applied Sociology. University of Wisconsin. Aug. 31, 1973.

THIS STUDY considers how the character of rural areas and small towns is affected by industrial development. It addresses the question, Will industrializing rural areas contribute to the solution of the twin problems of rural poverty and urban blight, or will it merely hasten the spread of urban ills? The assumption is that new economic opportunities will increase the size of the nonmetropolitan population by reversing out-migration to the point where there is a net gain of population, will stimulate business activity, will improve the quality of life in rural areas, and, in the long run, will relieve pressure on existing urban areas.

 Beck, Elwood M., Jr.
 University of Wisconsin, Madison, WI 53706
 University of Colorado, Boulder, CO 80302

Industrial Development and Urbanization: A U.S. Case.
 Center of Applied Sociology. University of Wisconsin.
 Aug. 1972.

THIS PAPER examines the feasibility of industrial development in rural areas and small towns without urbanization. The examination begins with a consideration of some factors which appear to account for the past parallel of industrialization and urbanization as well as the current viability of the factors. Some results from the monitoring of a case study of industrial development in a rural area are reported.

 Burke, Marianne
 Saltiel, Suzanne
 Clark, John P.
 University of Wisconsin, Madison, WI 53706
 University of Illinois, Urbana, IL 61801
 University of Illinois, Urbana, IL 61801
 University of Minnesota, St. Paul, MN 55101, respectively.

Stability of the Structure of Work Orientations Among High School Students. Multivariate Behavioral Research 6: 35-50. Jan. 1971.

"THE WORK Component Study" was administered to high school students and the stability of the structure of the variables of work motivation examined. The structure found among college students and college trained employees is well developed at the high school level. The relationship of work motivations to personality variables and to aspirations is also clear. However, there is little relationship found between work motivations and status variables of the students or their parents. This was unanticipated and creates a question regarding the sources of work motivations.

 Clark, John P.
 Seiler, Lauren H.
 University of Illinois, Urbana, IL 61801
 University of Minnesota, St. Paul, MN 55101
 University of Illinois, Urbana, IL 61801, respectively

The Renewal of Community Sociology. Rural Sociology
 35(2):218-231. June 1970.

STUDENTS of community have not developed a cumulative body of knowledge which can be called a sociology of community. Four of the major reasons for this failure are (1) the tendency to confuse studies of community-related phenomena with analysis of community, (2) the perpetuation of competing and noncomplementary approaches to the study of community, (3) the emphasis upon viewing each community as a spatially and temporally unique phenomenon, and (4) the schism between rural and urban (or nonrural) sociologists. We believe that a sociology of community is both possible and worthwhile. Its development will require for many sociologists fundamental shifts in organizational, conceptual, and methodological orientation.

 Hough, Richard L.
 Johnson, Doyle P.
 Veatch, Kathryn A.
 University of Wisconsin, Madison, WI 53706
 College of Wooster, Wooster, OH 44691
 University of South Florida, Tampa, FL 33620
 University of Illinois, Urbana, IL 61801, respectively.

Ascetic Protestantism and Political Preference: A Re-examination. Review of Religious Research 12(1): 17-25.

THIS PAPER replicates Johnson's study of effects of the religious factor on political identification. Johnson found an "inverse" relation between attendance at a liberal ascetic Protestant church and Republican identification and a "positive" relation between attendance at a fundamentalist ascetic Protestant church and Republican identification. A previous replication by Anderson confirmed Johnson's findings only for fundamentalists. Survey data gathered in a rural midwest area were consistent with Anderson's findings rather than Johnson's, based on the direction of the relationship. However, neither Johnson nor Anderson determined the statistical significance of their findings. When this is done, the present study replicates both Johnson's and Anderson's in showing that church involvement and political identification are not significantly related. The point is made that greater care should be exercised in applying appropriate inferential statistical techniques to data which on the surface appear to support a theoretically well-grounded hypothesis.

 Hough, Richard L.
 Scott, John T., Jr.
 Folse, C.L.
 University of Illinois, Urbana, IL 61801

Before Industrialization: A Rural Social System Base Study. Illinois Agr. Exp. Sta. Bul. No. 736. Dec. 1969.

THE PRIMARY objective of this report is to provide an understanding of the existing basic systems before the impact of industrialization. Background material is provided for establishing existing trends and base lines from which changes in the systems can be viewed in years to come. The report focuses primarily on the economy of the area, although some data is presented on the ecological, demographic, governmental, and educational systems.

A secondary objective of this report is the application of the theoretical systems orientation to the material presented. It is anticipated that such an application may provide a focal point around which much of the later project re-

porting may revolve.

Seiler, Lauren H.
Hough, Richard L.
University of Wisconsin, Madison, WI 53706
Queens College, City University of New York, NY
University of Texas, El Paso, TX

Psychiatric Symptoms: Cross-Validation with a Rural Sample. Rural Sociology 36(3): 367-378. Sept. 1971.

GENERALIZATION is an objective of science and measurement is a sine qua non. Taken together they dictate that measurements must be reliable and valid and that results obtained must be transferable to populations beyond the unique sample from which they are initially obtained. Instruments of measurement are always developed from observations of a finite and unique sample of observational units. One approach to assessing the generalizability of both instruments and results is to repeat the observations with a new sample of observation units, that is, cross-validation.

This article addresses two questions. First, how does the Midtown Psychiatric Impairment Index perform in a rural population? Second, how do the prevalence rates in a sample of rural communities compare with previously reported rates?

Seiler, Lauren H.
Wiley, Glenn
University of Wisconsin, Madison, WI 53706
University of Illinois, Urbana, IL 61801

Validation of Reputational Leadership by the Multitrait-Multimethod Matrix. In Edgar F. Borgatta and George W. Bohrnstedt, eds., Sociological Methodology, 1970. Jossey-Bass Publishing Company.

THIS ANALYSIS examines the convergent and discriminant validity (Campbell and Fiske, 1959) of four reputational techniques for identifying general community leaders and educational leaders. A second purpose of the analysis is to illustrate the utility of the multitrait-multimethod matrix for

the solution of measurement problems in sociology.

Wanner, Richard A.
Beck, E.M.
University of Wisconsin, Madison, WI 53706

Least-Squares Estimation of Effects on Inter- and Intragenerational Occupational Transition Probabilities. 1972 Social Statistics Section, Proceedings of the American Statistical Association. Washington, DC, pp. 14-19. 1972.

A GREAT DEAL of attention has been devoted recently to the development of models for the estimation of the relative influence of a set of explanatory conditions on binary dependent variables. This paper presents the application of one of the suggested techniques to two social processes which lend themselves to conceptualization within this framework: intergenerational and intragenerational occupational mobility.

Individuals can be characterized as having certain probabilities of making a transition from a prescribed set of "origin" positions into some set of "destination" positions. The authors utilize a model which provides for the introduction of independent conditions to explain variations in the probabilities of movement out of these origin positions.

Warren, Richard D.
Beal, George M.
Bohlen, Joe M.
Yetley, Vervin J.
Evers, Frederick T.
Iowa State University, Ames, IA 50010

The Changing Cooperative Scene in Iowa. Research Monograph, Sociology Rpt. No. 109. Dept. of Sociology. Iowa State University. 1973.

THIS MONOGRAPH was prepared for the managers participating in the 1971 sample, as well as individuals interested in an overview to Project No. 1915. Selected variables from the study are presented in tabular form. A series of variables are also presented in graphic form, each variable compared to

an efficiency and a size indicator.

Although significant changes were found in all cooperatives, the most dramatic changes occurred in the most efficient and the largest cooperatives.

Beal, George M.
 Bohlen, Joe H.
 Yetley, Mervin J.
 Evers, Frederick T.
 Iowa State University, Ames, IA 50010

Managers and Firm Characteristics of Farm Supply Cooperatives in Iowa. Research Monograph, Sociology Rpt. No. 107. Dept. of Sociology. Iowa State University. 1973.

THIS MONOGRAPH, the base data book for Project No. 1915, includes a presentation of data on farmer cooperative managers' attitudes, orientations, knowledge, and role performance. Business firm variables involving size, efficiency, and profit were also examined. The managerial and firm data were collected from 153 bonafide member-owned farmer cooperatives in the state of Iowa.

The monograph also incorporates comparisons to similar data collected in 1966 on 82 managers (Project No. 1626).

The managers and their firms were shown to be generally more successful in many cooperative operations in 1971 than they were in 1966. Variables not included in the 1966 study are examined in the final chapters of the monograph and an appendix is included as a base for future analysis.

Rogers, David L.
 Evers, Frederick T.
 Iowa State University, Ames, IA 50010

Social System Goals in Cooperatives. Unpublished manuscript. Dept. of Sociology. Iowa State University. 1974.

VIII. GENERAL RURAL DEVELOPMENT

Angus, James A.
University of Minnesota, St. Paul, MN 55101

Spatial Distribution of Employment: Alternatives for a Metropolitan Region. Unpublished Ph.D. dissertation. Dept. of Agricultural and Applied Economics. University of Minnesota. (Date?)

THIS STUDY is concerned with one dimension of urban growth within a region; namely, the spatial distribution of employment. The study focuses on the development of procedures for: (1) projecting the intra-regional distribution of employment given present trends toward metropolitan concentration, and (2) constructing alternative future employment distributions corresponding to a specified "focused decentralization" alternative. Projections of the spatial impact of urban growth alternatives would be of value to policy makers and planners concerned with future urban growth.

The first objective is to develop concepts and methods for generating projections of employment for a particular metropolitan region and its subregions. The second objective of this study is to introduce alternative spatial distributions of employment corresponding to the "focused decentralization" category of urban growth alternatives.

Barnard, Jerald R.
Macmillan, James A.
Maki, Wilbur R.
University of Minnesota, St. Paul, MN 55101

Evaluation Models for Regional Development Planning.
Regional Science Association Papers 23: 117-138. 1969.

THIS PAPER is concerned with the formulation of a research design for measuring and evaluating the impact of a

federal-provincial regional development program on the Interlake Area of Manitoba. The evaluation process is approached through a comprehensive system of social accounts formulated after the two-region input-output model. The system of social accounts includes both current and capital accounts for business and government and provides the basis for the development of a dynamic model of the economy. The accounts also have special provisions for relating the development program expenditures to the public and private sectors of the two regions.

A dynamic mathematical model is outlined that will simulate the growth of the Interlake Area and province over time as the basis for measuring and evaluating the programs of the development plan. To the extent that the research goal can be accomplished, progress will be made in understanding the impact of alternative development programs, in promoting regional development, and in developing a comprehensive model of regional economic growth.

Center for Agricultural and Rural Development
Iowa State University, Ames, IA 50010

Rural Community Development Seminar Proceedings: Focus on Iowa. Center for Agricultural and Rural Development. Iowa State University. 1972.

Erickson, Donald B.
Biere, Arlo W.
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Kansas State University, Manhattan, KS 66506

City and County Public Expenditures, Kansas--1960 to 1970. Kansas Agr. Exp. Sta. Bul. No. 578. Kansas State University. Feb. 1974.

THIS REPORT is primarily for the use of public officials in their operation of city or county government. It provides a basis for comparison with other operations of similar size. Actual expenditure data are obtained from 238 city and 105 annual county budgets in the state auditor's office. The per capita expenditures for 1960-1970 are presented in addition to the population for each city and county for each year. Some conclusions regarding operation efficiency are advanced based on differences in the quality, quantity, range, and

scale of the public services offered.

Fraase, Ronald G.
Heitsgaard, Thor
Maki, Wilbur R.

A Study of the Economic Interdependence of Minnesota and North Dakota. Report published jointly by Dept. of Agricultural Economics, North Dakota State University, and Dept. of Agricultural and Applied Economics, University of Minnesota, in cooperation with the Souris-Red-Rainy River Basins Commission.

THE PRINCIPAL objectives of this study are concerned with economic measurement, not only of present relationships but also of the statewide impacts of past and potential resource development activities in the Souris-Red-Rainy Region. They focus on the following concerns:

1. The current economic situation in Minnesota and North Dakota as it relates to resource development potentials in the Souris-Red-Rainy Region and the rest of the two states.
2. The on-going economic process affecting the current economic situation, with particular emphasis on commodity and money flows between the two states as well as the impact of each state's recreational industry.
3. The development of a data base to determine the past and potential impacts of resource development in the two states on each state.

Of fundamental importance to the study is the identification and measurement of key economic linkages between Minnesota and North Dakota and the implications of these linkages for multistate resource development planning and programming.

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Analyzing Alternatives in Regional Resource Development.
Dept. of Agricultural and Applied Economics Staff Paper
No. P73-32. University of Minnesota. 1973.

TO HELP in developing and testing alternative approaches to regional resource planning, a multi-county study area was selected several years ago in West Minnesota. This area is part of a multi-region which focuses on the Fargo-Moorhead SMSA.

Future patterns of resource development in Minnesota and the Upper Midwest can be influenced by public policy choices on future population distribution. The choices are typified by two contrasting settlement alternatives: (1) a continuation of the historical trends in population redistribution from peripheral areas to the metropolitan core areas, particularly the Twin Cities Metropolitan Area (TCMA); (2) the emergence of one or more subregional growth poles to absorb part of the industry expansion and population growth which otherwise could occur in the TCMA.

Each of the regional development alternatives implies certain infra-structure requirements, including public facilities for municipal and industrial water supply, wastewater treatment, solid waste collection and disposal, flood control, land treatment and drainage, irrigation, recreation, power, and planning and development. These nine areas are of immediate concern to municipal, township, and county government units and, especially, the West Minnesota Resource Conservation and Development Project Committee. This Committee prepared a work plan in 1972 where specified project proposals are identified. These proposals are summarized and presented as an indication of some current priorities and concern in infrastructure planning.

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Area Financing of Water Resources Development.
Minnesota Water Resources Research Center Bul. 1973.

A 14-COUNTY environmental planning area in West Minnesota was identified for the purpose of studying financing alternatives in water resource development. Nine of the 14 counties belong to a newly established Regional Commission. This Commission has responsibility for planning, research, and review of local government activities in the nine-county area. The remaining five counties are included with other newly organized Minnesota planning regions.

Altogether, 719 units of local government (exclusive of the newly established planning commissions) were included in the study area in 1967, the base year for the study.

Economic and organizational structures in the 14-county area are described and analyzed in this study. A computable model of the area economy is presented. Estimates of the degree of internal interdependence of the area economy are derived as a basis for assessing the current status of the area economy and its public financing potentials. The base-year data are used subsequently in the preparation of a projected 1980 inter-industry transactions table.

An expanded system of area product and income accounts is presented, also, for both the base year and the target year. These accounts are used in assessing the public economy as part of a total area economy. Water resource development potentials and financing requirements and alternatives are identified in the context of all public expenditures and outlays in a multi-county area.

The data and methodology developed in the study provide a basis for comprehensive resource planning and programming on a multi-county scale.

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Policy Considerations for Urban-Rural Balance. Dept. of Agricultural and Applied Economics Staff Paper No. P70-12. University of Minnesota. June 1970.

BECAUSE an urban-rural balance denotes some sort of easy and comfortable relationship between man, space, and resources, the question of large-scale settlement design in the public interest becomes a prime policy consideration. Following the thrust of the reports of several distinguished panels of citizens and professional people working on problems of urban and rural development, a series of policy considerations is outlined in the report as follows:

1. Formulation of a framework for estimating and evaluating regional settlement alternatives in the context of a multi-state regional system of area development districts and neighborhood service centers.

2. Improvement of public financing systems by removing certain serious inequities in the assessment of taxes between

metropolitan and nonmetropolitan areas and in the recovery of the social costs of private enterprise in densely populated metropolitan core areas.

3. Improvement of public service systems, particularly education, health, housing, and transportation, to greatly facilitate opportunity access for all residents of a region.

4. Implementation of new organizational structures for interstate and inter-community cooperation in economic development efforts at both the regional and area levels of public planning.

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Small Area Applications of Input-Output. Dept. of Agricultural and Applied Economics Staff Paper No. P70-22. University of Minnesota. Dec. 1970.

IN THIS paper, small-area applications of input-output are illustrated by four studies: one for Itasca County in northern Minnesota; another covering a 14-county environmental planning area in West Minnesota; a third covering a seven-county area in southwest North Dakota; and a fourth for Audrian county in north central Missouri. The one-county and seven-county studies are based wholly on local survey data, while the 14-county study is based partly on primary and partly on secondary data. Only manufacturing enterprises in the 14-county area were interviewed. Most of the structural estimates are based on national and state census data and the results of other input-output studies of dominantly rural-agricultural economies.

Finally, a multi-state regional input-output framework is presented for the upper Midwest. In the large region, small-area studies have an important part to play in the analysis of the spatial differentiation of economic activity with reference to both private sector and public sector planning. What is critical in the evaluation is the way in which information is organized to show the linkages between the future and the present, and between the future economic base and the present service systems.

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Social Environmental Systems for Regional Development Planning. Regional Science Perspectives 3: 66-88. 1973.

THIS PAPER focuses on information needs for implementing public programs of resource use and control. Economic models for producing the needed data are presented as activity components of an extensive computer modeling capability. The activity components are building blocks in the construction of a workable system for relating research findings to management and policy questions in regional development.

Resource-use conflicts emerge as significant social concerns when a given power cluster is unable to resolve its resource-use conflicts internally, which usually means that decisions made within the power cluster have significant external impacts. New organizational arrangements must be developed for resolving the inter-power cluster conflicts and, more importantly, for achieving important public purposes.

Major issue areas associated with current efforts to achieve certain public goals are described in terms of (1) balanced national growth, (2) optimal management scale of service delivery systems, and (3) citizen participation in area-wide environmental management. In each of the broad issue areas, resource-use conflicts are not being resolved; rather, new points of conflict are emerging which require new approaches for relating what we know about public program potentials to what we want in the way of regional development and quality of life.

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Spatial-Economic Decentralization in a Metropolitan Region. Regional Science Association Papers 24: 119-132. 1970.

BECAUSE the increasing social and economic plight of many depopulating areas is linked closely to increasing congestion and pollution in the few growing areas of the Upper Midwest, legislative and administrative committees in at least one state are studying the need for, and implications of, a regional settlement policy. Efforts to establish multi-county planning and development councils, although

unrelated legislatively or administratively to an emerging urban-rural settlement policy, nonetheless contribute to area-wide potentials for improving the quality of social services and expanding the range of economic and social opportunities for residents of presently declining areas.

Of particular concern in this paper is the role of educational institutions in supporting both multi-county environmental planning and multi-state regional development. A conceptual framework is presented that relates area and regional educational efforts in upgrading professional and technical capabilities in the public sector to the migration question and the broad concerns of a regional settlement policy. In addition, decision levels for dealing with problems of environmental quality and economic growth are identified with reference to area planning and regional development.

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Use of Public Investment to Guide Urban-Regional Development. Center for Urban and Regional Affairs. University of Minnesota. Seminar Series--Seminar on Land Use. Summer 1973, revised Fall 1974.

THREE STUDIES of resource development in Minnesota and the Upper Midwest are described insofar as they may help in identifying and assessing the use of public investment to guide urban-regional development. In one study, alternative economic futures are prepared for the multi-state Twin Cities Metropolitan Region (TCMR). Production, income, and employment implications of the alternative futures are presented for multi-county areas within the TCMR.

A second study provides a computer-based analytical capability for determining private investment potentials in export-producing and residential activities in the Fargo-Moorhead Subregion (FMSR). As in each of the three studies, an interindustry transactions table was prepared for the study area. In this study, however, a plant location procedure was prepared, also, for selecting potential subareas which are suitable for industrial plant or public facility location.

A third study provides an additional computer-based capability for fiscal and ecologic impact analysis. The study focuses on a West Minnesota planning area. Rather than a

spatial programming procedure, this study presents procedures for a set of area development accounts which can serve as a data base for area-wide capital improvements programming.

 Framingham, Charles F.
 Sandell, David J.
 University of Manitoba, Winnipeg, Canada

Population Projections for Manitoba by Region and Town Size--Some Alternatives, 1971-1990. Dept. of Agricultural Economics Res. Bul. No. 73-2. Sept. 1973.

THE OBJECTIVES of the study are:

1. To construct a model suited to the development of age-, sex-, and location-specific population projections for the Province of Manitoba given specific assumptions concerning births, deaths, and migration.
2. To develop the capacity to derive estimates of labor force and household formations from the population projections.
3. To specify several sets of assumptions concerning births, deaths, and migration which will indicate the nature of population projections given alternate assumptions concerning each component.
4. To develop the data base required in order to make projections utilizing the model constructed and each of the specified sets of assumptions.
5. To employ the model to make population, labor force, and household formation projections based on the assumption sets specified.
6. To present and briefly discuss the results.

In order to accomplish the study objectives, it was necessary to: (1) secure or construct a demographic model appropriate for use in projection of Manitoba's future population, (2) delineate Manitoba regions appropriate for use in the development of population projections, (3) specify assumption sets which best portray the impact of alternate birth, fertility, death, and migration assumptions on Manitoba's future population, and (4) determine sources of data satisfactory for use in the study.

 MacMillan, James A.
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Regional Systems for Development Planning in Manitoba.
 Dept. of Agricultural Economics Res. Bul. No. 70-1.

ECONOMIC and social development will be stimulated by the placement of public services. If public facilities are properly placed, they can help to provide all Manitobans with equal access to social services.

In planning the location of service centers, the industrial potential of a region must be appraised, with consideration of its ability to attract a labor force and to find markets for its products. Ideally, a logical framework for regional planning would include a set of objectives, programs for achieving specified objectives, techniques for measuring linkages between programs and objectives, and evaluation of program successes and failures.

Accordingly, the purpose of this report is to present analytical approaches to regional development planning in Manitoba, which have application to the Upper Midwest Region in the United States. Altogether, six major aspects of the planning process are presented, starting with the problem of defining objectives for public programs.

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The Emptying of the Countryside and Its Cost.
 Proceedings Conference on Labor Force: Migration,
 Earnings and Growth at Muscle Shoals, Alabama, June
 1972. Sponsored by the Social Security Administration
 and the Tennessee Valley Authority.

A REVIEW of the migration studies of the past decade reveals a changing emphasis from simple correlation studies to more complete analyses of the migration function as an essential element in area development planning. An accounting of the full costs of migration may exceed current capabilities in both conceptualizing the cost-benefit relationships and measuring the cost-benefit impacts. The evidence suggests, however, that to simply account for the private costs and benefits is inadequate, especially in assessing the ex-

ternal costs of migration from a declining rural area to a rapidly growing major regional area. The cost of emptying the countryside is likely to depend upon the location and scale of urbanization in a regional settlement system as well as upon the individual migrant and his success in coping with the relocation process.

Given a growing national concern about population and its distribution, along with partial and conflicting evidence on the social impacts of migration, the need persists for a more complete accounting than is now available of migration costs and potentials. Systematic approaches to the social cost analysis of migration have been proposed at various conferences. Some of these ideas, in terms of area and regional analysis, are extended in this work.

Morey, R. Vance
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Systems Models for Studying Rural Development Problems.
Paper No. 73-5524. American Society of Agricultural
Engineers. Dec. 12, 1973.

THE MODEL is a simulation study of the Red River Basin, which includes 35 counties in northwest Minnesota and eastern North Dakota. The model was developed to study impacts of policy alternatives over time on key variables, such as population by age and occupational classifications, employment by economic sector, resource requirements, and effluent generation. The model describes the important interactions among population, employment, economic output, final demand, capital stock, and environmental submodels. Data for the model were collected on a secondary basis from many sources, including the various U.S. censuses.

Results are presented which study the relative impacts of policies compared to a "base run." The base run begins with the best estimates of all data from 1960 and is calibrated with population and employment data. Policies studied include the effects of increasing exports of agricultural production, food processing, and manufacturing sectors by fixed percentages per year for ten years; increasing productivity in agriculture and manufacturing; and a declining birth rate through 1980. Results include the effects on population, available labor force, total employment, employment in the laborer, manager, and farm occupational groups, energy

and water requirements, and effluents produced. Sensitivity indices are calculated which provide a measure of the changes in the above output variables for each new job created as a result of the policies.

North Central Regional Center for Rural Development
Iowa State University, Ames, IA 50010

Rural Development: Research Priorities. Ames: Iowa State University Press. 1973.

Powers, Ronald C.
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Multicounty Units as a Basis for Domestic Change Programs. In L.T. Wallace, D. Hobbs, and R.D. Vlasin, eds., Selected Perspectives for Community Resource Development. Agricultural Policy Institute. North Carolina State University. Raleigh. 1969.

THE "AREA" concept of community development was initiated in the early 1960's. This paper examines the concept of planned change as it relates to initiating change in areas which are functional in the economic sense but not necessarily functional in the sociological sense. Taking the posture of the social scientist, especially the sociologist who is asked for assistance after the decision has been made as to the geographic area, the author outlines the means of applying the Loomis Social Systems Model to determine the degree to which a functional economic area is also a functional sociological area. The author also suggests the utility of using the model to plan the strategy to be used when initiating an area-wide social and economic development program. The paper is based on unpublished data and the author's direct involvement with the area concept in Iowa.

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Sociological Strategies in a Multicounty Development Program: A Case in Sociologing. In George M. Beal, Ronald C. Powers, and E. Walter Coward, eds., Sociological Perspectives of Domestic Development. Iowa State

University Press. Ames. 1971.

THE PAPER is an extension of the previous general paper by the author on multicounty development. The purpose of the paper is to provide a detailed description of the process of operationalizing action strategy from sociological concepts and propositions in the multicounty area where previous data had been collected regarding resources and activities basic to economic development. The paper provides an overview of the action context and steps taken, a discussion of the models used to guide program strategy and the criteria used for their selection, and a discussion of the manner in which these models were operationalized. Two major models were used to generate strategies: Beal's social action construct and Loomis's social system model. From these conceptual frameworks evolved an overall strategy designed to create a new area social system--the initial step being the creation of an area decision-making center in the form of an area development leadership group. A major point of the paper is that the selection of sociological models for strategy-building may be constrained by the characteristics of the initiating change agency. Thus, a public agency may not consider a conflict model of change.

Rogers, Keith D.
Mayer, Leo V.
Heady, Earl O.
Thornton, Theodore
Ellingson, Wayne
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The State of Social and Economic Development in the North Central Region of the United States. North Central Regional Center for Rural Development Res. Rpt. Iowa State University. 1974.

Rohrer, Wayne
Quantic, Diane
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The Changing Midwest. Dept. of Sociology. Kansas State University. (In progress.)

THE RESEARCH in this publication concerns community change or development in the twelve midwestern states for the century and one-half of Caucasian occupancy. Novels of the region's communities are used to describe change to the 1930's; sociological research reported on midwestern sites is used for the period since 1930. Published fiction and sociology are synthesized to describe and analyze changing communities. The publication is organized according to social institutions.

A thesis of the work is that community development or change is comprehensible if the past is better understood. Observations on the Middle West are synthesized in order to understand how the region arrived where it is. That knowledge should be useful in present-day community development efforts.

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The Flow of Funds Through the Commercial Banking System,
Minnesota and North Dakota. Minnesota Agr. Exp. Sta.
Bul. No. 506. 1972.

THIS PUBLICATION is based on an analysis and presentation of primary county income and call report data (which is a balance sheet statement of assets and liabilities) provided by the Federal Reserve Bank of Minneapolis. This is the first time such data are published in this form.

Financial markets, by providing an intermediary between savers and investors, play a fundamental role in the economic development process. In rural areas of Minnesota and North Dakota, commercial banks are the single most important financial institution, providing somewhat more than 35 percent of the total credit needs of the agricultural community. In addition, the correspondent banking system provides one mechanism for transferring funds between regions and sectors. This publication presents evidence and analysis on the importance of commercial banks as a financial intermediary in mobilizing funds and as a transfer agent of funds between sections of Minnesota and North Dakota.

Ulrich, Martin A.
Maki, Wilbur R.

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Financing Public Services in West Minnesota. Minnesota Agr. Exp. Sta. Bul. No. 509. 1973.

THE PRIMARY objectives of the study are three-fold: (1) to describe the critical linkages of the public economy of a low-income area in the periphery of a multistate, metropolitan-centered development region; (2) to estimate flows of public funds from various services to various uses in an environmental planning area; and (3) to assess the potentials for reshaping governmental structures for improving social services and reducing public financing gaps.

Secondarily, the study has several methodological objectives, which are summarized in one phrase: concept-and-model-building. Economic analysis for environmental planning and regional development is notoriously lacking in both concepts and models for preparing information that advances public knowledge. Underlying the study objectives, therefore, is the notion that knowledge-search must be linked to action-planning.

Wasson, K. William
DeMarzo, Robert S.
Fear, Frank
Wilcox, Leslie D.
Klonglan, Gerald
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A Methodology for the Measurement of Social Indicators of Human Resource and Community Development. Canada. Aug. 1974.

THE RECOGNITION that the measurement of development is more than economic outputs has prompted efforts to add the "social" assessment dimension. The establishment of a procedure by which local units can locate pertinent information sources within their jurisdiction was the first goal. From the data base the key items of data or indexes to assess both the intended and unintended "social" costs/consequences involved in decision making in health, the sample area of human concern, are identified. The procedure developed is designed to be useable for other areas of human concern also. The county is the basic unit of analysis.