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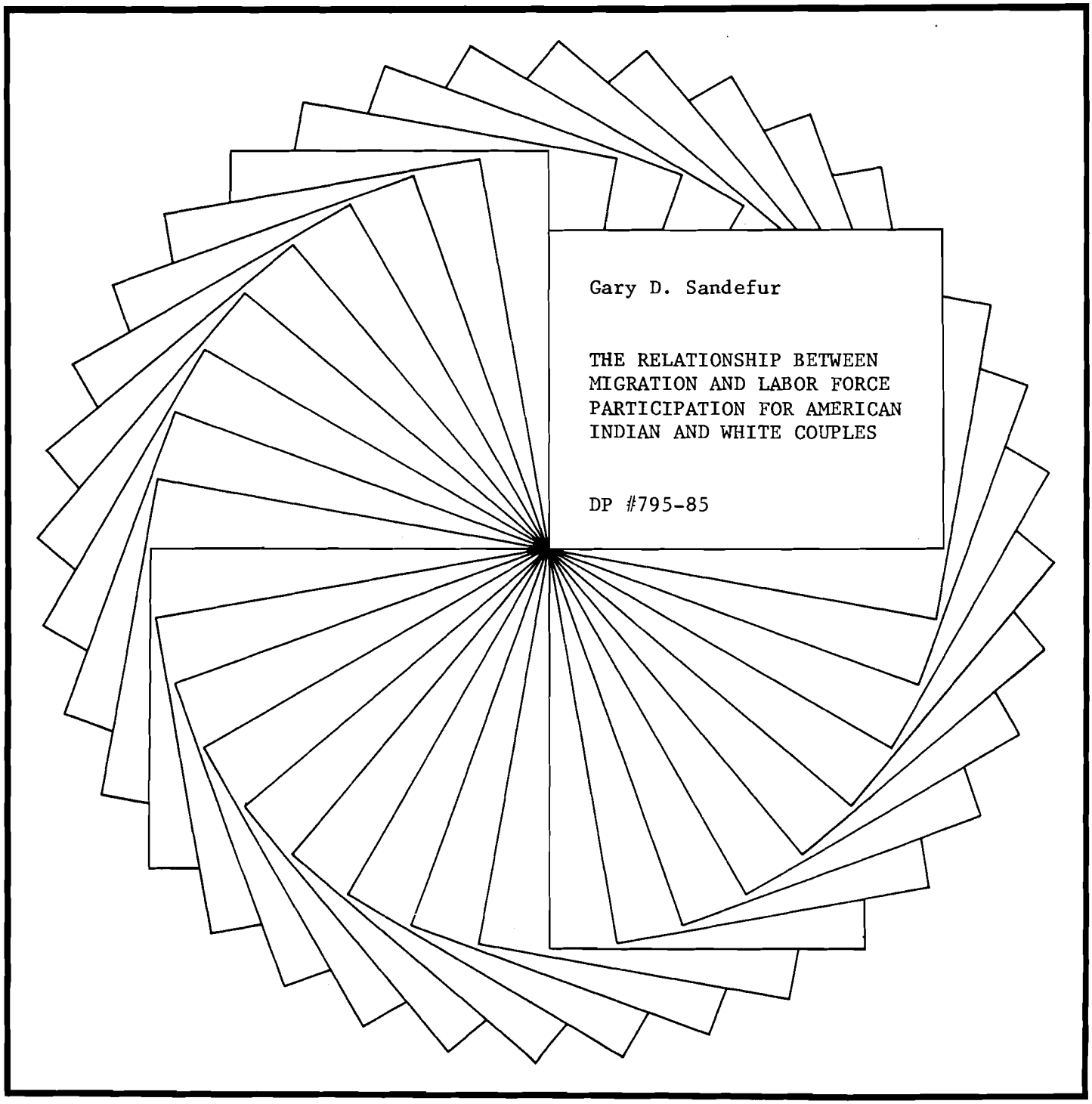

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THE RELATIONSHIP BETWEEN MIGRATION AND LABOR FORCE PARTICIPATION FOR AMERICAN INDIAN AND WHITE COUPLES

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The Relationship Between Migration and Labor Force Participation for American Indian and White Couples

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Abstract

This paper examines interstate migration and labor force participation among white, American Indian and intermarried Indian/white couples. The results show that endogamous American Indian couples are much less likely to change states of residence than are the other two groups of couples. The effect of interstate migration on labor force participation does not vary across the three groups of couples. The implications of these results for the assimilation and internal colonial models of race relations and for federal Indian policy are discussed.

The Relationship Between Migration and Labor Force Participation for American Indian and White Couples

Most research on racial/ethnic variations in migration has focused primarily on the differences in migration patterns between blacks and whites (see, for example, Miller, 1974). There has been little work done on the migration of American Indians. This is unfortunate, since American Indians represent a unique population in regard to their past migration history and the current context within which their migration takes place. They constitute the only subpopulation of the United States whose current geographical location is largely a function of governmental policies that specified where they could and could not live. These policies were part of a federal governmental effort that gradually restricted Indian spatial distribution in the late 1700s and throughout the 1800s until Indians were largely concentrated on reservations in isolated rural areas west of the Mississippi.[1] In the last half of the twentieth century, they have been one of the few groups for whom the government has provided migration assistance. The Bureau of Indian Affairs, part of the U.S. Department of Interior, began a program in the 1950s, which persisted in one form or another until 1984, to assist Indians who wished to relocate from rural and/or reservation areas to metropolitan areas.

The purpose of this paper is to examine one limited aspect of American Indian migration--the interstate mobility of couples during the early to mid-1970s. The analysis addresses two questions: (1) What are the determinants of American Indian interstate migration? and, (2) Does migration enhance the ability of American Indians to find employment? In

examining the first issue, the paper will test the applicability of conventional explanations of migration to the case of American Indians and test for differences in the effects of variables as determinants of white vs. American Indian migration. Examining the second issue will involve analyses of the effect of migration on employment status or labor force participation. The paper will examine the extent to which this effect is similar for whites and Indians. The data to be used are from the 1976 Survey of Income and Education. We focus on married individuals only to facilitate an examination of the impact of intermarriage on interstate migration.

A THEORETICAL MODEL OF AMERICAN INDIAN MIGRATION

The Determinants and Consequences of Migration

There are a number of sociological and economic theories of why people move. Most theories view migration as a change in location intended by the migrant to result in a change or changes in some features of his/her life. The decision to move is influenced by various motives and constraints.[2] Among these motives and constraints are life-cycle characteristics including age and the number of children (Long, 1972; Sandefur and Scott, 1981). Interstate migration decreases with age. The presence of children in the household, which increases the number of people to be moved, reduces the likelihood of migration (Long, 1972). Another important determinant of migration is human capital. The higher the value of an individual's human capital, the greater the number of alternative opportunities open to him/her, and the greater the

probability of migration, ceteris paribus (Shaw, 1975). Two important types of human capital are education and health. Most research shows that highly educated people are more mobile than those with fewer years of completed schooling. Individuals with good health are more mobile than those with poor health, though some moves do occur in response to health needs.[3]

Although there is considerable agreement on the important determinants of migration, there is less agreement on the consequences of migration. Some research indicates that migrants are more successful than nonmigrants who remained in the location from which the migrants came (Cutright, 1974; Rieger, 1972; Long and Heltman, 1975). On the other hand, Miller (1966) found that interstate migration had little or no impact on labor force participation. This analysis examines the effect of migration on employment status controlling for the size of the current place of residence. In this way the effect of the actual move can be separated from some of the effects of the chosen destination.

Theories of Minority Groups and Migration

In order to determine ways in which Indian migration may differ from that of white Americans, it is important to understand the implications of theories of minority groups for studying migration. Though few theories of minority groups make explicit predictions about contemporary migration, applying these different theories can lead to different expectations about Indian migration. This paper utilizes two alternative theoretical perspectives: the assimilation model and the internal colonial model.

The assimilation model asserts that American Indians and other groups are gradually assimilating into American society (Gordon, 1964). There is evidence that indicates that some Indians have assimilated. During most of this century Indians have not experienced the barriers to white acceptance that were characteristic of the experiences of blacks. As Deloria (1982) points out, Indians have usually been accepted into white society if they have adopted the life style, work habits, and culture of the dominant group. Indians have also experienced considerable intermarriage. In 1976, over 40 percent of married American Indians were married to non-Indians, whereas only about 3 percent of married blacks were married to nonblacks (Sandefur and Scott, 1983). Consequently, there are reasons to expect that at least some American Indians are assimilated and that American Indian migration will resemble that of whites.

Though careful measurement of assimilation is impossible with the data used in this analysis, it is possible to compare the experiences of those Indians who have married whites to the experiences of those who have not. Intermarried Indians may respond to motives and constraints, and experience the consequences of migration, in much the same way as whites, whereas the migration patterns of the endogamous Indians may be quite different.

The hope that migration would facilitate the assimilation and economic advancement of American Indians led to the development of the Bureau of Indian Affairs Direct Relocation Program (later known as the Employment Assistance Program). This program was initiated in 1950 and continued in one form or another until 1984. The program provided financial assistance and counseling to those American Indians who wished to

move from reservations and former reservation areas to large metropolitan areas where more opportunities were supposedly available. Sorkin (1971) found that individuals who moved under the auspices of this program were better off than individuals who remained on reservations.

The internal colonial model takes a somewhat different view of the relationship of American Indians to American society. In this model, Indians are viewed as a separate people in many ways, a nation or nations within a nation, or an internal colony or colonies (Blauner, 1972). Indians constitute a separate group in at least three ways. First, Indians are geographically isolated from the rest of American society. This historical process of isolation has led to their residence far away from the population and economic centers of the country. Second, there are distinct differences between traditional Indian cultures and ways of life and dominant American culture. These differences include the central emphasis placed by Indians on community and family that rivals in strength the emphasis placed by postindustrial American society on work (Wax, 1971). Third, the geographical isolation of Indians and their desire to pursue their own style of life has led to their exclusion from full participation in the American economy.

This status as an internal colony may mean that Indians will not respond to motives and constraints in the same way as whites. Indians may respond to a different set of constraints focused on their community and family, and may not seek or take advantage of opportunities open to them through migration. In addition, the internal colonial model suggests that the consequences of migration may be quite different for American Indians from the consequences for white Americans. The historical exclusion of Indians from capitalism, which has prevented them from

developing work-related skills that are marketable in industrial labor markets, and the involvement of American Indians in culture, community, and family may mean that migration will be a much more devastating and disruptive event in their lives than in the lives of white Americans. Carson and Cebula (1981) found evidence to support the view that American Indian migrants chose destinations with high levels of public assistance, presumably because of their lack of marketable skills. Migration may not have the same positive impact on American Indian employment status that it has on white employment status.

DATA AND METHODS

Data

The data for this paper are from the 1976 Survey of Income and Education of the U.S. Census Bureau. These data were collected from a sample of 151,170 households selected through standard multi-stage probability sampling procedures. From this sample, a sample of 2.5 percent of white couples, and all intermarried and endogamous American Indian couples whose average age was between 25 and 54 were selected. The age criterion was designed to exclude college students and retirees. Only married couples are included in the analysis, since intermarriage is a key variable. There are 233 endogamous American Indian couples (both spouses are Indian), 543 intermarried couples (one spouse is Indian and one is white), and 1344 white couples (both spouses are white) in the sample.

Methods

The analysis of the determinants of interstate migration and its effect on labor force participation involves estimating a recursive system of two equations. Since married couples are the units of analysis, it is necessary to make some assumptions about measuring interstate migration and labor force participation. A couple is coded as having moved if either spouse reports having moved during the past five years. The labor force participation of a couple is defined in terms of whether or not either spouse worked at least some during the previous year (1975). Both statistical theory and substantive theories of migration and labor force participation suggest that it is best to model discrete variables such as interstate migration and labor force participation as indicators of unobserved continuous variables. Recent theories and research on migration have suggested that underlying the actual act of moving or staying is a continuous variable that can be termed "intentions to move" (Bach and Smith, 1977). Once these intentions reach a certain level the couple moves. Labor force participation is a discrete indicator of the underlying level of opportunities open to a couple. These opportunities are a function of both individual characteristics and the labor market characteristics of the place in which the couple is located. Once these opportunities reach a certain level, the husband and/or the wife find employment. The statistical theory underlying methods for analysis of discrete data (e.g., logistic and probit regression) is also based on the assumption that there is an underlying continuous variable which is reflected in the measured discrete variable (Winship and Mare, 1983).

If we assume that the relationships between the unmeasured continuous variables and their discrete indicators are deterministic, and that it is the move itself rather than the intention to move that affects opportunities, the following set of equations can be used to represent the model and can be estimated with standard logistic regression analysis:

$$(1) \quad MIGNINTS = \alpha_0 + \alpha_1 RACE + \alpha_i LC_i + \alpha_j HC_j + \varepsilon_{MI}$$

$$(2) \quad OPPS = \beta_0 + \beta_1 RACE + \beta_i LC_i + \beta_j HC_j + \beta_k LOC_k + \beta_{i+j+k+2} d_{MI} + \varepsilon_{OPPS}.$$

where RACE refers to the racial composition of the household, LC refers to the life-cycle variables, HC refers to the human-capital variables, ε_{MI} is the error term for the migration equation, LOC is the set of location variables, d_{MI} is a dummy variable indicating whether the individual has moved or not, and ε_{OPPS} is the error term for the opportunities equation. Further, we assume that

$$COV(\varepsilon_{MI}, \varepsilon_{OPPS}) = 0.$$

Measures

The measures of the variables are listed in Table 1.

RESULTS

Characteristics of the Three Groups

Table 2 contains the means and proportions for selected variables. Separate figures are given for each group. The proportion of American

Table 1

Measures of the Variables

Variable	Measure
INTSTMIG	1 = at least one spouse changed state of residence during 1971-1975; 0 = else
HH LFP	1 = at least one spouse worked during 1975; 0 = else
INDIAN	Husband and wife are American Indian
INTERMARRIED	One spouse is American Indian; the other spouse is white
WHITE	Husband and wife are white
MALE AGE	Age of male in years
FEML AGE	Age of female in years
HH SIZE	Number of people living in the household
MALE EDUC	Male years of education
FEML EDUC	Female years of education
MALE LIMIT	1 = male has health a limitation on his ability to work; 0 = else
FEML LIMIT	1 = female has a health limitation on her ability to work; 0 = else
BOTH LIMIT	1 = both spouses have health limitations on their ability to work; 0 = else
BIG SMSA	1 = couple resides in an SMSA with 250,000 or more; 0 = else
RES STATE	1 = couple resides in a state containing at least one Indian reservation; 0 = else

Table 2

Means, Proportions, and Standard Deviations of
Dependent and Independent Variables for Three Groups

	Indian Couples		Indian/White Couples		White Couples	
INTSTMIG	.099		.273		.187	
HH LFP	.961		.915		.980	
MALE AGE	40.511	(8.896)	38.252	(9.324)	40.279	(8.903)
FEML AGE	37.180	(8.456)	34.341	(8.405)	37.292	(8.262)
HH SIZE	5.807	(4.113)	3.751	(3.072)	3.302	(2.781)
MALE EDUC	8.803	(4.318)	11.519	(3.123)	12.773	(3.057)
FEML EDUC	9.210	(3.800)	11.254	(2.654)	12.391	(2.577)
MALE LIMIT	.133		.136		.082	
FEML LIMIT	.103		.114		.063	
BOTH LIMIT	.052		.048		.028	
BIG SMSA	.129		.337		.480	
RES STATE	.927		.621		.483	
N	233		543		1344	

Note: Numbers in parentheses are standard deviations.

Indian couples who changed states of residence between 1971 and 1976 was .099, which is considerably lower than the proportion of white and intermarried couples who changed states of residence during the same period. Intermarried couples were most likely to have changed states. On the other hand, it is the intermarried couples who are least likely to have at least one individual participating in the labor force. Of intermarried couples 91.5% have at least one member participating in the labor force, compared to 96.1% of endogamous Indian couples and 98% of white couples. Intermarried couples are also younger than endogamous Indian and white couples. This is probably due to a cohort effect on intermarriage (i.e., the incidence of intermarriage is higher in the more recent marriage cohorts).

American Indian households are considerably larger than white and intermarried households. The educational levels of endogamous Indian males and females are lower than those of the other two groups. However, intermarried and endogamous Indian couples have similar levels of health limitations on their ability to work. Summing the three types of health limitation shows that 28.8% of endogamous Indian couples have at least one member who has a limitation on his/her ability to work, compared to 17.3% of white couples and 29.8% of intermarried couples.

There are also substantial differences in the location of these groups. Only 12.9% of Indian couples reside in an SMSA with 250,000 or more people, compared to 33.7% of intermarried couples and 48% of white couples. Fully 92.7% of endogamous American Indian couples reside in a state containing a reservation or reservations,[4] compared to 48.3% of white couples and 62.1% of intermarried couples.

The Determinants of Interstate Migration

Table 3 contains the results of estimating the effects of possible determinants of interstate migration. Logistic regression was used to estimate three models. Model 1 contains a constant only, and is based on the assumption that each couple had the same likelihood of migrating during the previous five years. It is presented solely for purposes of comparison. Model 2 assumes that the likelihood of interstate migration varies with the racial composition of the couple.[5] Model 3 assumes that all independent variables have effects on the likelihood of migration. A fourth model, in which the effects of the independent variables were assumed to vary with the racial composition of the couples, was also estimated. It did not improve over Model 3, and it is not presented in the table.

In Table 3, a negative effect of a category (e.g., Indian) means that being in that category decreases the likelihood of interstate migration, while a positive effect means that being in that category increases the likelihood of interstate migration. A positive effect for a continuous independent variable (e.g., Male Age or Feml Educ) means that the likelihood of moving increases as the variable increases, whereas a negative effect means that the likelihood of moving decreases as the variable increases.

The Chi-squared test of Model 2 shows that it represents an improvement over Model 1. There are significant differences in the likelihood of interstate migration across the three types of households. Model 3 contains all the determinants of interstate migration. The Chi-squared test of improvement indicates that this model represents a significant

Table 3

The Determinants of Interstate Migration

	Model 1	Model 2	Model 3
Constant	-1.39	-1.55	-.858
INDIAN		-.656	-.329
INTERMARRIED		.573	.437
WHITE		.083	-.108
MALE AGE			-.022†
FEML AGE			-.048
HH SIZE			-.054
MALE EDUC			.158
FEML EDUC			.022†
NO LIMIT			-.230
MALE LIMIT			.251
FEML LIMIT			.256
BOTH LIMIT			-.277
Chi-Squared Test of Goodness of Fit	2080.758 df=2022	2045.190 df=2020	1842.329 df=2012
Chi-Squared Test of Improvement		35.568 df=2	202.861 df=8

†The effects of these variables were not significant at the .05 level.

improvement over Model 2. The racial composition of the household continues to exert a significant influence on whether the household migrated or not. The likelihood of migration also declines with the size of the household (-.054) and with the age of the female in the household (-.048). The education of the husband is also an important determinant of migration (.158). Couples for whom neither or both spouses have health limitations on the ability to work are less likely to move than couples in which one member has health limitations.

The results of Model 3 indicate that household differences in levels of migration are not due to the association between household racial composition and other determinants of migration. Though endogamous Indians have less education and larger families than white and intermarried couples, these differences do not explain the less frequent migration of endogamous couples. There are a number of possible explanations of this phenomenon. First, the ability to move to another state is dependent on the financial resources available to a family. It is likely that endogamous Indian couples have the lowest level of resources of the three groups, although these resources could be supplemented with aid from the BIA. Second, endogamous couples may not be as aware of opportunities in alternative geographical locations as are white and intermarried couples. Since endogamous couples are more likely to live in isolated locations, they may not receive very much information about jobs elsewhere. Third, the involvement of endogamous Indian couples in Indian culture may impede their desire and willingness to migrate. Endogamous Indians may be reluctant to migrate and sever or restrict ties and commitments that are such an important part of their lives. Intermarriage, on the other hand,

may create ties to multiple communities. Part of the interstate migration of intermarried Indians may be due to movement back and forth between traditional Indian areas and areas outside "Indian country."

The Determinants of Household Labor Force Participation

Coefficients from four models of household labor force participation are reported in Table 4. Model 1 assumes that all couples have the same likelihood of having at least one spouse participating in the labor force. Model 2 assumes that this likelihood varies depending on the racial composition of the household. The Chi-squared test of improvement indicates that this model represents a significant improvement over the first model. White couples are most likely to have at least one spouse in the labor force and intermarried couples are least likely to have at least one spouse in the labor force. Model 3 assumes that household labor force participation is dependent on household racial composition, number of children, age, education, health status, interstate migration, residence in a large metropolitan area, and whether an individual resides in a state in which there are Indian reservations. The Chi-squared test of improvement indicates that this model represents a statistically significant improvement over Model 2.

Not all the variables in Model 3 have significant effects on household labor force participation. The size of the household, the ages of the couple, and male education do not have significant effects. The education of the wife and health status do have significant effects. The likelihood of having at least one spouse in the labor force increases with the education of the wife (.139), is highest for those couples with

Table 4

The Determinants of Household Labor Force Participation

	Model 1	Model 2	Model 3	Model 4
Constant	3.21	3.16	1.39	1.50
INDIAN		.054	.452	.726
INTERMARRIED		-.781	-.801	-.949
WHITE		.727	.349	.223
MALE AGE			-.024†	-.027†
FEML AGE			.002†	.005†
HH SIZE			-.036†	-.030†
MALE EDUC			.046†	.046†
FEML EDUC			.139	.138
NO LIMIT			1.265	1.275
MALE LIMIT			-.071	-.080
FEML LIMIT			.196	.225
BOTH LIMIT			-1.390	-1.420
INTSTMIG			.713	.530
BIG SMSA			-.417	-.438
RES STATE			-.194†	-.189†
INDxIM				-.441†
INTSxIM				.250†
WHITExIM				.191†
Chi-Squared Test of Goodness of Fit	694.182 df=2058	655.766 df=2056	536.725 df=2045	535.327 df=2043
Chi-Squared Test of Improvement		38.416 df=2	119.041 df=11	1.398† df=2

†The effects of these variables were not significant at the .05 level.

no health limitations (1.265) and lowest when both spouses have health limitations (-1.390).

Interstate migration has a significant impact on labor force participation. Those households who have migrated are more likely to have at least one spouse in the labor force (.713) than are those who have not. Residence in a large metropolitan area decreases the probability of having at least one spouse in the labor force (-.417). Residence in a state containing an Indian reservation does not significantly affect household labor force participation.

Model 4 is an interactive model in which the effects of migration on labor force participation are assumed to vary with the racial composition of the household. Although the effect of interstate migration on employment is smallest for endogamous Indian couples (.530 - .441 = .089), the interaction terms and differences among the groups are not statistically significant. This indicates that the impact of interstate migration on the likelihood of having at least one spouse in the labor force does not vary significantly across the three groups of couples.

SUMMARY AND CONCLUSIONS

The results of this paper indicate that (1) endogamous American Indian couples change states of residence considerably less often than do white couples or intermarried white/Indian couples; (2) these differences do not disappear after controlling for other determinants of migration; and, (3) there are no significant differences in the effects of interstate migration on the labor force participation of the three groups. Some of the results support the assimilation model. The level

of migration of some American Indians, those who have intermarried, exceeds that of white married couples. Both endogamous and intermarried Indian couples respond to the determinants of migration in essentially the same way as white couples, and migration has similar consequences for labor force participation for the three groups.

There is also evidence to support features of the internal colonial model. Endogamous American Indians move very little relative to the other two types of couples. Their lack of movement is not explained by low education, poor health, or large family size. Though variations in other unmeasured determinants of migration may account for some of the difference in migration rates, the results indicate that the role of interstate migration in the lives of endogamous Indians is much different from its role in the lives of the other two groups.

The results that bear on the Employment Assistance Program of the Bureau of Indian Affairs are mixed. Although interstate migration exerts a significant influence on the labor force participation of each group of couples, residence in a large metropolitan area does not increase the likelihood of employment. Other research shows, however, that Indian earnings and income are higher in large metropolitan areas than elsewhere (Sandefur and Scott, 1986). These findings are not contradictory; the quality of employment among those who are employed is likely to be much better in large metropolitan areas than elsewhere. The "loss" resulting from such mobility is largely noneconomic--a loss of family, community, and tribal ties--and it cannot be measured with data collected by the U.S. Bureau of the Census. The positive consequences of mobility suggest that assistance with the expenses of migration may be an effective way of

dealing with the economic needs of Indians who wish to move, but such assistance does not help those Indians who wish to remain in isolated rural areas.

The results of this paper suggest that additional research is needed on American Indian migration, as well as on the relationship between migration and economic well-being. Research on American Indian migration should examine the migration patterns of both single and married American Indians and look more carefully at the origins and destinations of single, intermarried, and endogamous Indians. Information on the relationship between migration and economic well-being is important not only to satisfy scientific curiosity, but because some aspects of current U.S. Indian policy are based on the assumption that the right kind of American Indian migration--from a "bad" origin to a "good" destination--is a solution to the problems of some Indians.

Notes

[1]A reservation is a geographical area under the jurisdiction of an Indian tribal government. On most reservations, the land is owned by a tribe rather than by individual members of a tribe.

[2]Rather than attempt to characterize the larger theoretical approach that encompasses all possible determinants of migration, this paper discusses variables that are available in the data used in the analysis. There are other factors that enter into the migration decision that cannot be defined as life-cycle characteristics or human capital. For example, family and community ties and social psychological attitudes concerning migration are very important determinants of migration. There are no measures of these variables in the 1976 Survey of Income and Education.

[3]Other important determinants of migration that are measured in data collected by the Census Bureau are occupation, industry, and job rewards. These factors cannot be included as determinants of migration in the analyses below, since they are unavailable for people who are unemployed or not in the labor force.

[4]It is not possible to determine with the SIE data whether individuals reside on reservations. It is possible to determine whether they reside in states that contain reservations.

[5]In the logistic regression package used in the analysis (BMDPLR), the effects of categorical variables are estimated such that the effect of the excluded category is equal to minus the sum of the estimated effects of the included categories. Thus, the coefficients for a set of categories (e.g., INDIAN, INTERMARRIED, and WHITE) sum to zero.

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