ETHNIC DIFFERENCES IN MARITAL INSTABILITY

Dennis P. Hogan, Community and Family Study Center, The University of Chicago

Introduction

Ethnic differences in rates of marital instability have been observed by virtually every demographic and sociological study of the topic. Higher rates of marital disruption among blacks have not been accounted for by reference to a variety of social and demographic background variables with conventional methods of crosstabular analysis and ordinary least squares regression techniques. Sources of differential rates of disruption between Anglos and Spanish origin men have received only limited attention

The research reported here answers two questions:

- Can ethnic differentials in marital instability be accounted for by reference to additional characteristics of family background and early career?
- 2. Do log-linear models of analysis do better in accounting for ethnic differences in marital instability than have previously applied analytic methods?

Data

The data for this study are drawn from the 1973 "Occupational Changes in a Generation" Survey (OCG-II), which was carried out in conjunction with the March demographic supplement to the Current Population Survey (Featherman and Hauser, 1975). In 1973, the eight-page OCG questionnaire was mailed out six months after the March CPS and was followed by mail, telephone, and personal callbacks. The respondents, comprising 88 percent of the target sample, included more than 33,500 men aged 20 to 65 in the civilian noninstitutional population. Also, blacks and persons of Spanish origin were sampled at about twice the rate of whites, and almost half of the black men were interviewed personally. In this paper we shall examine factors that determine rates of marital disruption; therefore, we restrict our analysis to the ever-married men who compose the population at risk.

The OCG Survey is unique in providing an extensive account of demographic and family background data for large numbers of men so that separate analyses by ethnic groups are possible even though the event studied is relatively rare. The OCG-II data produce a pattern of racial differences of the sort expected—14.5 percent of the Anglos and 12.7 percent of the Spanish men experiencing a marital disruption because of separation, divorce, or widowhood as compared with 23.6 percent of the ever-married black men 20 to 65 years of age.

The CPS-OCG data do not include information about the cause of termination of first marriage for those men who have subsequently remarried. Men in their second or later marriage are counted along with those who are currently separated, divorced, or widowed as having experienced a disruption. Since date of termination of first marriage is not available, the dependent variable measures the prevalence (i.e., ever-occurrence) of a marital disruption. All models include marriage cohort (years since first marriage) as a control for differing length of exposure to the risk of a disruption.

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Ordinary Least Squares Regression Models of Marital Disruption

Ordinary least square multiple regression models of marital disruption, by ethnic group, for ever-married men aged 20 to 65 as of March, 1973, are shown in Table 2. The models indicate that socioeconomic characteristics of family of origin have only trivial direct effects on marital disruption. Farm origin is the only exception—men from a home in which the father was primarily employed as a farmer or farm laborer experience rates of disruption about two and a half points lower among whites and over six points lower among blacks.

These trivial effects of socioeconomic origins on marital stability are not the result of collinearity among the independent variables. When measures of socioeconomic origin are entered into the equation in stepwise fashion the regression coefficients are no larger than in a model incorporating the entire set of family background factors. Even the zero-order regression coefficients are trivial.

The structure of the family of origin is of more relevance to the permanence of a man's own marriage. Net of socioeconomic standing of family of origin, growing up in a nonintact home reduces the chances of an intact marriage by about five points among whites and about two points among blacks.

Net of family background (including farm origin) and early socioeconomic attainments, region of birth is a factor of substantial relevance for later marital stability. Generally, men born in the Southern, Central, or Western United States experience higher rates of marital disruption than those born in the Northeastern United States or born abroad. The differences are significant among Anglos, with men from the Northeast experiencing rates of disruption about five points below other native-born men. The foreign-born enjoy rates about three points lower than men from the South, West, or Central States.

An additional year of schooling reduces the likelihood of a marital disruption about one point among Anglos. While the relationship of education to marital instability among Anglos is similar in magnitude to what has previously been estimated, it can hardly be termed massive.

First job status bears no relationship to the intactness of a man's first marriage among any of the ethnic groups. These same results characterize even the youngest men among whom the effects of first job on marital stability should be most apparent (Hogan, 1976: Chapter 5).

While years of schooling is of limited importance and first job of no importance for the stability of a man's first marriage, these models indicate rather large differences in levels of marital disruption between men who served in the Armed Forces and those who did not. Among Anglos, men who are veterans experience rates of disruption 3.7 points higher than other men. The size of the coefficients are smaller for blacks and Spanish ancestry men but there is no clear evidence that the consequences of military service differ by ancestry. Speculatively, we believe that the negative consequences of military service are specific to those men who were married either prior to or during their military service. Such couples would be more subject to frequent moves, prolonged absences of the husband from home, and any strains induced by on-base living. Higher rates of separation and divorce result among servicemen and among veterans to the extent that the initially heightened levels of marital discord persist after military service.

Finally, these models indicate that among Anglos the ordering in which a man finishes school, begins work, and marries is of considerable consequence for the stability of his marriage. A man who is still in school at the time of marriage or who returns to school after marriage experiences rates of disruption four points higher than men who have finished school and have begun a first job by the time of marriage. Men who have finished school by the time they are married but who either began work at their first jobs prior to completing schooling or after marriage experience rates two points higher than men who follow school with the beginning of work and then marry. The coefficients among the blacks and Spanish fluctuate somewhat but are not significantly different from those of the Anglos.

Since the ethnic groups differ in family background and early attainment compositions, the demographic and socioeconomic differentials in marital instability may at least partly account for ethnic differences in rates of disruption. Following the procedures of Sweet and Bumpass

(1974) the black and Spanish rates can be standardized by inserting the black means into the least squares regression estimates for Anglos. The linear regression models of Table 2 account for only 15 percent of the excess of black disruptions over Anglos, but all (105 percent) of the difference between Spanish and Anglos under this procedure. The differing compositions of the racial groups as regards family background and early career achievements are thus insufficient to explain the higher rates of marital instability among blacks.

Log-Linear Models of Marital Disruption

In a series of papers introducing log-linear modelling techniques to the discipline of sociology, Goodman (1970; 1971; 1972; 1976) has demonstrated that conventional techniques of cross-tabular analysis can produce fallacious interpretations of one's data. Linear multiple regression models are plagued with problems of possible bias and unreliability in situations where the dependent variable is dichotomous and the proportion in each category is outside the 25 to 75 percent range (Goodman, 1976; Knoke, 1975). The study of differentials in marital disruption is, of course, exactly such a case. How well do the findings reported here hold up under a more rigorous log-linear analysis? This is the question to which we now turn.

The log-linear model estimated (Table 3) includes as independent variables those factors most relevant in determining rates of marital disruption, as identified by the least squares regression model. The baseline model allows for the associations among the independent variables (marriage cohort, age at marriage, military service, parental structure, ancestry, region of birth, and education) and for the associations due to the proportion of the total population experiencing a marital disruption. The association unexplained by the baseline model (and measured by the chisquare statistic) is entirely due to the associations of the independent variables, either alone or jointly, with the dependent variable. The first model fit is a full additive structural model which includes a parameter for the direct association of each independent variable with marital disruption. The amount and proportion of the baseline chi-square statistic attributable to the direct effect of each variable, net of the direct effects of each other variable, is shown in Panel C. By far the largest component of association of these variables with marital disruption is accounted for by the direct association of rate of disruption with marriage cohort. This is followed in order by age at marriage, military service, parental structure, ancestry, region of birth, and education each of which has a significant direct association with disruption, net of the direct effects of all other variables.

The nature of the effect of each variable on rate of marital disruption is shown in Table 4. The gross effects are similar to zero-order regression coefficients. The full additive structural model is analogous to a logit model which incorporates the direct net effect of each independent variable on the dependent variable. The direct net effects are generally of the sort expected on the basis of the earlier linear models. The longer ago a man was married, the higher his chances of having experienced a disruption of his first marriage. The gross rates of disruption are 57 percent higher among men growing up in a nonintact home but this is reduced to 38 percent once compositional differences in regard to origin and early attainments are controlled.

The blacks are 65 percent more likely to experience a disruption than Anglos, while the Anglos have net rates only 6 percent higher than the Spanish. Net of controls for education, age at marriage, and ancestry, men who are foreign-born or born in the South have rates of disruption that differ rather little from the average. But the gross differentials for men born in the Northeastern United States persist net of controls, men from the Central and Western States 46 percent more likely to experience a disruption than men born in the Northeast. With the exception of birth in the Northeastern States, the region is which a man is born has considerably less effect on his chances of marital stability than is ordinarily believed (c.f., Carter and Glick, 1970).

Gross education differentials in rates of disruption are quite pronounced. However, men with the lowest education are especially likely to be in the earliest marriage cohort and/or are more likely to have married at an early age. When these sources of spurious and indirect effects are removed, the net effects of educational attainment on disruption are greatly reduced. The pattern is generally monotonic with a lower education inducing disruption. The single exception to this pattern is that men

with some college who failed to receive their degrees have higher rates of disruption than either high school or college graduates.

The deleterious effects of service in the Armed Forces for stability of first marriage are enlarged when other variables are controlled. The gross differential of 25 percent is increased to a 39 percent higher rate of marital disruption among veterans when the effects of all other variables are statistically controlled.

Age at marriage has the expected inverse relation to disruption, but the big difference is for men married prior to age 21 as compared with all other men. Men married at this very young age have a net rate of disruption 71 percent higher than men marrying between age 21 and 24. These latter men, in turn, are only six percent higher in rates of disruption than men married at an even later age.

Tests for joint associations (interactions) among the independent variables in their effects on the dependent variables were performed using a forward stepwise procedure. Two interactions were observed to be significant net of the direct effect of each independent variable, as well as net of each other. The military service-age at marriage interaction is the larger of the two (Table 3). The older the age at marriage of a man, the less the importance of his service in the military for the stability of his marriage. Generally, the older a man's age at marriage, the less likely marriage is to have occurred prior to discharge from the service. This suggests that it is spending some of the years of early married life in the Armed Forces that strains the marital bond and increases the likelihood of a disruption, rather than any psychological concomitant of service in the military.

The second interaction observed is in the joint effects of marriage cohort and ethnic ancestry on marital disruption. The patterns are complex, but the major difference is between black men married 1920—47 and all other men. While the racial difference is particularly pronounced for earlier marriage cohorts, it is less evident for men first married after 1962. While this relationship may, in part, result from higher black rates of mortality (which produce progressively larger racial differentials in widowhood in the older ages), it seems more likely to be a result of a failure to locate separated and divorced young blacks for CPS-OCG interview.

Summary and Conclusions

The substantive results of the analysis in this paper have largely served to verify previous research findings about differentials in marital disruption. Thus, we have confirmed that there is a tendency to inherit a pattern of marital instability from the parental generation net of socioeconomic background factors. Men born in the Northeastern United States do experience lower rates of disruption than men born elsewhere and this differential cannot be explained by socioeconomic, demographic, or ethnic national origin factors. While higher levels of schooling generally decrease the risk of a marital dissolution, men who drop out of college suffer higher rates of disruption than men who complete either high school or college. Age at marriage likewise displayed its traditional inverse relationship with rates of separation and divorce.

New findings indicate that men who have finished school and are in the labor force at the time of marriage enjoy more stable marriages than men who spend a part of their married years in school or military service. The appropriate sequencing of events in the life cycle and especially the disruptive effects of military service on the timing and achievement of job status and marital stability are subjects especially worthy of further pursuit. These findings hold true with both traditional linear regression models of the determinants of marital instability, as well as with the new and more appropriate log-linear modified regression models.

Conventional linear regression models indicate no major differences among the ethnic groups in the impact of other socioeconomic and demographic variables on marital stability. Such models indicated that only 15 percent of the racial difference in rates of marital instability can be attributed to a wide variety of social and demographic characteristics. The relatively similar gross rates of marital instability characterizing the Spanish and Anglo ancestry men persisted with controls for other variables. These findings are unchanged when the mode of analysis is switched to a statistically more appropriate log-linear modified multiple regression models. These findings substantively suggest that the traditional characterization of Spanish origin people as having an especially strong family structure is essentially incorrect.

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Table 1: MEANS AND STANDARD DEVIATIONS OF DEMOGRAPHIC, FAMILY BACKGROUND, AND EARLY ACHIEVEMENT VARIABLES, BY ANCESTRY, EVER-MARRIED U.S. MALES BORN 1907–1952.

Variables ^a	Anglos		Spanish		Blacks	
	X	S.D.	X	S.D.	X	S.D.
Place of Birth						
Central, West	.403	.491	.230	.421	.911	.285
Northeast	.252	.434	.032	.176	.062	.240
South	.296	.457	.251	.434	.824	.38
Foreign	.049	.216	.487	.500	.025	.15
Parental Family						
Intact	.857	.350	.771	.420	.666	.47
Siblings	3.670	2.612	5.257	2.875	5.138	2.94
Father NILF	.056	.230	.106	.308	.078	.26
Father's Education	8.632	3.927	5.007	4.596	6.371	3.95
Father's Occupa-						
tion, SEI	30.274	22.524	20.742	18.885	16.238	13.93
Farm Origin	.229	.421	.409	.492	.401	.49
Mother's Education	9.156	3.614	4.815	4.305	7.422	3.88
Family Income—						
100s	99.558	76.541	60.687	67.692	51.094	49.36
Education	11.985	3.044	9.043	4.193	9.901	3.60
Military Service	.580	.494	.289	.454	.415	.49
Ever Worked at						
First Job	.968	.175	.936	.245	.971	.16
First Job, SEI	33.542	24.676	24.193	20.381	20.149	18.02
Temporal Ordering						
Typical, school-		475	600	450	700	4.5
ing, job, marriage	.657	.475	.698	.459	.709	.45
Atypical, mar-						
riage follows school	.176	.381	.197	.398	.184	.38
	.1 /0	.361	.197	.396	.104	.30
Atypical, school follows marriage	.167	.373	.105	.306	.107	.31
•						
Age at Marriage	23.579	4.977	23.854	5.745	23.634	5.83
Years Since First	10.500	11.707	15 211	10.650	17.666	10.05
Marriage	18.598	11.727	15.311	10.650	17.666	12.07
Disrupted Marriage	.145	.352	.127	.333	.236	.42

^aAn intact parental family is one in which both parents are reported as having lived with the respondent most of the time up to his sixteenth birthday. Siblings refers to number of brothers and sisters. Father NILF is a dummy variable scored one if the respondent's head of family was not usually in the labor force. Education variables are scored in years of regular schooling completed (ranging from 0 for those with no schooling to 17 for those with one or more years of graduate or professional schooling). Occupations are scored using Duncan's index of socioeconomic status. Respondent's report of family income when he was age sixteen is inflated to 1972 dollars using the consumer price index for 1972 and the year of his sixteenth birthday. Military service is scored one if a man served six months or more on active duty in the regular armed forces, and zero otherwise.

Table 2: REGRESSION ANALYSIS^a OF DISRUPTED FIRST MAR-RIAGE ON DEMOGRAPHIC, FAMILY BACKGROUND AND EARLY ACHIEVEMENT VARIABLES, BY COLOR, EVER-MARRIED U.S. MALES BORN 1907-1952.

Independent Variables	Anglos -		Spanish		Blacks	
Place of Birth	<u>b</u>	Se(b)	<u>b</u>	Se(b)	<u>b</u>	Se(b)
Central, West						
Northeast	-4.97	.79	-9.33	6.84	-7.12	5.24
South	.49	.75	23	3.39	-2.62	3.74
Foreign	-3.27	1.51	86	3.21	6.13	7.33
Parental Family						
Intact	-4.73	.91	-6.13	2.90	-2.10	2.27
Siblings	34	.13	24	.43	02	.36
Father NILF	77	1.38	-3.15	3.91	1.17	3.87
Father's Education	12	.12	.20	.40	23	.36
Father's Occupa-						
tion, SEI	.00	.02	09	.08	07	.08
Farm Origin	-2.66	.84	-1.81	2.89	-6.23	2.44
Mother's Education	.25	.13	.10	.42	.22	.37
Family Income-						
100s	.01	.01	.03	.02	.01	.03
Education	-1.00	.15	30	.40	.33	.40
Military Service	3.74	.64	.75	2.88	1.89	2.18
Ever Worked at						
First Job	.43	1.83	4.25	5.29	-1.97	6.20
First Job, SEI	03	.02	.06	.07	05	.07
Temporal Ordering Typical, school- ing, job, marriage						
Atypical, mar-						
riage follows						
school	1.90	.86	4.80	3.34	4.80	2.75
Atypical, school						
follows marriage	4.21	.96	3.74	4.03	04	3.65
Age at Marriage	21	.06	39	.21	.16	.18
Years Since First Marriage	.38	.03	.50	.12	1.03	.10
R ²	.035		.054		.091	
Constant	26.28		16.35		13.14	

^aMen who have experienced a disruption of first marriage are scored 100; all others are scored 0. Unstandardized (metric) coefficients are shown. See Table 1 for definitions of the independent variables. The sample cases have been weighted to reflect true population proportions. The estimated standard errors are based on sample frequencies that are adjusted to reflect departures from a simple random sample.

Table 3: MODELS OF SELECTED FAMILY BACKGROUND AND EARLY ACHIEVEMENT DETERMINANTS OF MARITAL DISRUPTION, EVER-MARRIED U.S. MALES BORN 1907–1952^a.

Model ^b	χ² _{LR}	df	р	Δ χ	$\chi^2_{\rm H}/\chi^2_{\rm T}$
A. Baseline Model [D] [ERAPVMC]	1830.51	2159	> .5	8.02	100.00
B. Full Additive Structural Model [DE] [DR] [DA] [DP] [DV] [DM] [DC] [ERAPVMC] C. Direct Effect Net of All Other	1038.52	2144	> .5	5.16	56.74
Direct Effects 1. [DC] (marriage cohort) 2. [DM] (age at marriage) 3. [DV] (military service) 4. [DP] (parental structure) 5. [DA] (ancestry) 6. [DR] (region of birth) 7. [DE] (education)	304.54 142.25 51.33 35.90 45.47 43.63 45.77	2 2 1 1 2 3 4	.000 .000 .000 .000 .000	1.38 0.68 0.23 0.12 0.15 0.19	16.64 7.77 2.80 1.96 2.48 2.38 2.50
D. Gross Effect of Each Three- way Parameter ^c 1. [DAC] (ancestry-marriage	13.77	•	.000	0.23	2.30
cohort) 2. [DVM] (military service-age at marriage)	19.65 20.16	4 2	.000	0.08	1.07 1.10
E. Net Effect of Each Three-way Parameter ^d 1. [DAC] (ancestry-marriage cohort) 2. [DVM] (military service-	20.46	4	.000	0.10	1.12
age at marriage)	20.97	2	.000	0.09	1.15
F. Full Structural Model [DE] [DR] [DP] [DAC] [DVM] [ERAPVMC]	997.89	2138	> .5	4.99	54.51

^aThe sample cases have been weighted to reflect true population proportions. The estimated sample frequencies have been adjusted to reflect departures from a simple random sample.

Table 4: STRUCTURAL MODELS OF SELECTED FAMILY BACKGROUND AND EARLY ACHIEVEMENT VARIABLES ON MARITAL DISRUPTION, EVER-MARRIED U.S. MALES BORN 1907–1952^a.

	BUKN	1907-1932			
Independent Variables	Gross	Effects	Full Additive Structural Model ^c		
	$\beta = \ln \gamma$	<u></u>	$\beta = \ln \gamma$	<u> </u>	
(Intercept)	NA ^b	NA	-1.677	.187	
Marriage Cohort		•			
1962-73	599	.549	579	.560	
1948-61	.176	1.192	.172	1.188	
1920–47	.423	1.526	.407	1.503	
Ancestry					
Anglo	159	.853	148	.862	
Spanish	244	.784	206	.814	
Black	.403	1.496	.354	1.425	
Region of Birth					
South	.287	1.333	.092	1.096	
Northeast	225	.799	215	.806	
Central, West	.168	1.183	.165	1.179	
Foreign	231	.794	042	.959	
Parental Structure					
Nonintact	.225	1.252	.163	1.177	
Intact	225	.799	163	.850	
Education					
0-8	.338	1.403	.162	1.176	
9-11	.211	1.235	.094	1.098	
12	085	.919	084	.919	
13-15	.027	1.028	.120	1.127	
16-17+	493	.611	292	.747	
Military Service					
No	111	.895	163	.849	
Yes	.111	1.117	.163	1.177	
Age at Marriage					
0-20	.362	1.437	.377	1.458	
21-24	173	.841	158	.854	
25-65	189	.828	220	.803	

^aThese estimated effects are net of the associations among the independent variables. The parameters shown refer to the estimated odds of having experienced a disruption of first marriage vs. having an intact first marriage,

bD=Marital disruption (yes/no); E=Education (0-8/9-11/12/13-15/16-17+); R=Region of birth (South/Northeast/Central, West/Foreign); A=Ancestry (Anglo/Spanish/Black); P=Parental structure (intact/nonintact); V=Military service (non-veteran/veteran); M=Age at first marriage (less than 21/21-24/25 or older); C=Years since first marriage (i.e., marriage cohort) (1920-47/1948-61/1962-73). The notation indicates those marginal tables that are fit (i.e., used to predict cell frequencies) under that model. [D] indicates that the marriage cohort by marital disruption marginal table is fit. [DC]

 $[\]chi^2_{\ LR}$ is the likelihood ratio chi-square statistic.

df are the degrees of freedom.

p is the probability level that the chi-square statistic is due to chance.

 $[\]Delta$ is the index of dissimilarity between the observed sample frequencies and the expected frequencies obtained with that model,

 $[\]chi^2_{\ H}/\chi^2_{\ T}$ is the percent of the baseline (total) chi-square accounted for by the chi-square statistic of that model.

 $^{^{\}text{C}}$ Only interactions significant (p < .001) net of the full additive structural model are shown.

^dThe effect of each interaction net of the full additive structural model and the other three-way parameter from Panel D.

b Not shown due to different intercepts for each set of coefficients shown below.

^CThis model results in a 5.1 percent reduction in the conditional uncertainty of marital disruption. The maximum reduction obtainable with this set of independent variables is 11.7 percent.