

Intermarriage in Hawaii, 1950-1983

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This paper examines the extent of intermarriage between racial, occupational, age, prior-marital-status, and residential groups in Hawaii from 1950 to 1983. State of Hawaii Vital Statistics are the primary source of data, and U.S. Census data are analyzed for comparison whenever possible. The evidence suggests increases in the extent of intermarriage, but the rates of increase are smaller than expected. Blau's hypotheses concerning structural constraints as determinants of intermarriage are tested. Detailed analysis of the Hawaiian case reveals it to fit broadly into his model, although changes over time require cultural as well as structural explanation.

Many social observers and social science researchers have noted the growing rate of intermarriage in the United States, across both religious and racial lines. Interracial marriages increased from 310,000 in 1970 to almost 700,000 in 1982 (Statistical Abstract, 1984: 45). This trend is widely viewed as evidence of change in intergroup relations by those who seek to preserve a particular group's identity as well as by those who prefer broader social integration. From either perspective, the results of increased intermarriage are the same. Groups find it more difficult to maintain their membership, and ultimately to survive, while the pool of individuals whose identity is mixed along one or more dimensions grows increasingly larger.

Theories spanning psychological, cultural, and social-structural perspectives have been used to analyze intermarriage. The leading sociological tradition in the study of intermarriage is the cultural school, which holds that the trend toward increased intermarriage is the result of declining social barriers between different groups. In his book on intermarriage Gordon concluded that intermarriage would continue to increase as "the result of the general weakening of contemporary family and religious ties as well as the possession of similar educational, economical and social

backgrounds" (Gordon, 1964: 60). Concern with assimilation continues in such recent works as Monahan (1976b), Johnson (1980), Cretser and Leon (1982), Jansen (1982), Alba and Chamlin (1983), Kitano et al. (1984), Wilson (1984), Stevens (1985), and Lieberman and Waters (1985).

Research within the cultural tradition has tended to look at certain changes over time but to minimize the significance of the relative size of groups as a contributor to intermarriage rates. While culturalists often mention the relative size of different groups, they rarely measure the extent to which this crucial demographic constraint explains the patterns they observe.

Structuralist approaches, on the other hand, emphasize social constraints, such as physical distance and group size. For example, structural analysis has focused on social class hypergamy (Merton, 1941), occupational homogamy (Monahan, 1976a), and residential segregation (Heer, 1966). The most developed example of the structuralist approach is that of Blau and his colleagues, who have elaborated and tested a theory of the structural determinants of intermarriage in communities (Blau, Blum, and Schwartz, 1982; Blau and Schwartz, 1984; Blau, Becker, and Fitzpatrick, 1984). They propose that the relative size of different racial and ethnic groups and the degree of heterogeneity in the community will influence the rate of intermarriage. This work derives from Blau's theories regarding the importance of social-structural variables, such as heterogeneity and inequality, in influencing everyday behavior (Blau, 1977).

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Blau and his associates compared the 125 largest U.S. Standard Metropolitan Statistical Areas, examining marriages across boundaries of race, national origin, region, and occupation. They found, as predicted, that heterogeneity was directly related to outmarriage and that the size of particular groups was inversely related to the probabilities of intermarriage for group members.

The structuralists have tended to consider the importance of demographic factors at one given time but to deemphasize cultural distance and change over time. An exclusively structural theory that ignores the existence of cultural barriers is inadequate by itself, because without some cultural differences the structural differences would be meaningless. More important, a purely structural theory may well be inadequate to account for changes in the rate of intermarriage, since there may be much greater rates of change in intermarriage than there are in the social structures Blau and others have highlighted.

In short, there is a need to combine the insights of these two approaches in the study of intermarriage. We need to know the ramifications of structural constraints on intermarriage, and we need to know the relative importance of changes in social values. We shall then be in a position to consider the fundamental relationships between values and structures.

INTERMARRIAGE IN HAWAII

Blau notes that Honolulu is "an outlier on racial composition and intermarriage (but not on other variables)" (Blau, Blum, and Schwartz, 1982: 53n), and consequently he and his collaborators carefully examined the effect of removing this case on their findings. It is this very feature of social life, its polycultural quality, that makes Hawaii an especially useful case for an intensive investigation of intermarriage.

The state of Hawaii has a long history of being multiracial, with no single group constituting a majority of the island's population. Plantation owners played the major role in determining the timing and the composition of immigration (Lind, 1982). The first large-scale immigration consisted of 28,000 Chinese between 1852 and 1885. While all the workers ever needed could have been obtained from China, Lind has suggested that workers were recruited from diverse locations because "control over the work force could be more readily exercised if it did not consist exclusively of a single ethnic group" (1982: 13). Subsequent waves of major migrations were encouraged from Portugal, Japan, Puerto Rico, and the Philippines, and minor ones from a half a dozen other areas. At different times, single males

were encouraged to immigrate to form a temporary work force; at other times whole families were preferred.

Hawaiian society is noted as having "a remarkable degree of blending" (McDermott, Tseng, and Marezki, 1980: 1). It is the only state in which whites are not in a numerical majority, and whose dominance in many fields is being challenged by minority groups. Wittermans (1981: 154) notes that "due to the rapid rise of Japanese, Korean, Chinese and other ethnic communities, both in socio-economic position and in the fields of learning as well as artistic pursuits, the Caucasian community no longer can be seen as the one dominating force in Hawaiian society."

To what extent do social-structural factors continue to hold sway in conditions of extreme social diversity? Is there a point at which social life becomes so heterogeneous that ethnic and social barriers lose their salience as social markers? Hawaii, with its long history of multiple minority groups and their mixtures, remains the ideal place for a study of mixing.

The study of intermarriage in Hawaii has to date been examined principally from within the culturalist framework. A major concern in Hawaii has long been the consequences of marriage across ethnic lines for marital outcomes (Adams, 1937). Monahan (1966), Schmitt (1969) and Schwertfeger (1982) report generally higher divorce rates for interracial couples, although exceptions for particular age, sex, and ethnic combinations complicate this relationship. Other work has focused on clustering intermarriage patterns. Parkman and Sawyer (1967: 607) used multidimensional scaling for two time periods (1928-34 and 1948-53) to locate two dimensions: East-West (variations in race, religion, and nationality) and urbanicity (percentage of group living in Honolulu). Leon (1975: 780) found two major clusters of intermarriage, again reflecting an East-West divide, one consisting of Japanese, Chinese, and Korean and the other of Caucasian, part-Hawaiian, Hawaiian, Filipino, and Puerto Rican.

Trends over time have been considered in several studies. Schmitt (1971) notes that the historic trend toward increasing interracial marriage halted during the 1960s. Yamamoto suggests, as an explanation "for the slowing down of the increase in intermarriage rates," that people were "beginning to take pride in their distinctive ethnic identities" (Yamamoto, 1973: 321), although he notes that of the major groups only the Caucasians showed a significant decline in outmarriage during the '60s. Hormann suggests that the presence of increased military personnel dur-

ing this period, and "not a reassertion of ethnic identity" (1982: 118), contributed to this decline.

These studies of Hawaii have been largely descriptive and demographic, but in each the authors have found it necessary to address cultural concerns in order to explain their findings. Our approach initially will be structural.

In addition to testing Blau's theories on an extreme case, we propose to extend his analysis in several ways. First, we shall examine rates of intermarriage longitudinally, with detailed data covering the period from 1950 to 1983. Blau, Blum, and Schwartz (1982) and Blau and Schwartz (1984) have tested their theory only in a cross-sectional context, and so were unable to predict whether secular increases in heterogeneity would have resulted in increasing rates of intermarriage. It may be that increases in heterogeneity produce countervailing tendencies that offset the effects of heterogeneity on intermarriage. It is also possible that changes over time in the salience of racial and ethnic distinctions overwhelm the effects of heterogeneity, even though when comparing cities at one given time heterogeneity is significant. We can test the importance of heterogeneity and group size in Hawaii over a 30-year period and assess the significance of each as a predictor of changes over time. The longitudinal framework enables us to combine the strengths of the two schools of thought on intermarriage.

A closely related extension of Blau's model is the multivariate approach that we are employing in this work. For example, we shall examine the net effect of changes in heterogeneity, once the secular trends in intermarriage have been accounted for. Blau, Blum, and Schwartz (1982) consider the zero-order relationship between heterogeneity and intermarriage but do not examine whether this effect is explained by independent variables.

A third way in which the present study advances work in this area is by introducing sex-specific measures of heterogeneity and group size. Blau's theory highlights the importance of structural constraints on individuals' choices. Clearly the operative constraints facing men in the marriage market are the relative size of different groups of women and the degree of heterogeneity in the female population. Ethnic groups, particularly among populations recruited as laborers, have traditionally been composed of many more men than women. Thus the proper measures of the structural constraints on intermarriage are the sex-specific size and heterogeneity measures. We shall test whether sex-specific measures are more powerful predictors of outmarriage rates.

An additional use of multivariate analysis is the

examination of the effect of two types of social inequality. Race is a well-known marker of social distance, as are age and occupation. Do the effects of group size persist when these different attributes of groups are examined in unison, as recent evidence presented by Blau and colleagues (1984) suggests? By using detailed data on race and age and on race and occupation, we shall be able to answer these questions.

Thus, four questions are central to this analysis. First, do Blau's theoretical predictions of the role of heterogeneity and intermarriage hold for the most heterogeneous social milieu in the United States? Second, are structural or cultural changes more important in understanding changes in intermarriage in Hawaii? Third, do structural theories continue to hold when changing social trends are taken into account? And finally, do these relationships hold when several dimensions of social distance are considered in concert? The data brought to bear on these questions will perhaps serve to clarify a question of more general interest: To what extent does the structure of Hawaiian society today continue to mirror its immigration patterns?

DATA AND METHODS

Our data consist principally of vital statistics on marriage from 1950 to 1983, supplied by the Hawaii State Department of Health, which classifies marriages by age, occupation, prior marital status, race, and residence for most of the years.¹ Categories employed are listed on Table 1.² The term "race" is used for the annual Statistical Reports of the Department of Health of the State of Hawaii, although strictly speaking these are "ethnic stocks" and may sometimes be labeled as such by different sources.³ Earlier data also reflect a "fluidity of racial classification in Hawaii" (Peterson, 1969: 868), and a tradition to use "race" for what are more generally classified according to cultural, ethnic, or national groups (Lind, 1980: 24).

The vital statistics data are attractive for their detail and comparability over time. However, they are limited for our purposes by the fact that the more relevant measure of group size is the marriageable population. Census data were examined to determine whether the vital statistics analysis could be matched for the population as a whole. We made every effort to create comparable categories for census data and vital statistics.⁴ We examined the relation between size of group and outmarriage, using census data for size and vital statistics for outmarriage, for 1960, 1970, and 1980 for age, occupation, prior marital

status, and residence. In the case of ethnicity, we also included 1950 data.

We initially examined the correlates of the proportion of outmarriages for each group. Time trend, a rough measure of changing cultural orientation to group difference, was measured in years. We are measuring structural determinants of intermarriage and characterizing residual changes over time as cultural changes. The size of different groups was measured as the fraction of brides and grooms respectively. We compared data for brides and grooms, correlating size of group and intermarriage for age, occupation, prior marital status, race, and residence.

We used the vital statistics data to correlate heterogeneity and outmarriage. For the size measure the number of cases was the number of groups multiplied by the number of years; for the heterogeneity analysis there was one overall measure of heterogeneity per year and one summary measure of outmarriage. The formula for heterogeneity for brides (or grooms) was $1 - (\text{sum of the proportion of brides [or grooms] marrying within each group, squared})$ (Blau, Blum, and Schwartz, 1982: 50).

The statistical approach follows that employed by Blau. The bivariate correlations are supplemented with regression analysis for handling the multivariate aspects of the analysis. It should be noted that group rates of intermarriage are the dependent variable, as micro data are not available. Individual-level regression analysis is not possible in this context.

RESULTS

Let us first consider the trends in outmarriage for each of the five types of indicators we are ex-

amining: age, occupation, prior marital status, race, and residence. Data on outmarriage are presented for all of these indicators in Table 1.

The rate of outmarriage across age groups was quite constant over the 1955-83 period, hovering around the 60% mark. This high outmarriage rate reflects the extremely detailed age categories employed.

The rate of outmarriage for occupational groups declined over this period from nearly 90% to just over 75%. These rates were extremely high in part because of the category "no occupation," which includes a large number of women. The decline in occupational outmarriage reflects an increase in the proportion of women employed and a decline in occupational segregation by sex.⁵

Outmarriage rates for prior marital status have increased from 22% in 1960 to 28% in 1983. This figure is a by-product of the increasing proportion of divorcees in the marriage market. In 1960 17% of grooms and 19% of brides entering into marriage were previously divorced individuals; by 1980 this proportion had grown to 32% of both brides and grooms. Since divorcees remain a minority and are disproportionately likely to marry outside the group, this results in an increase in the overall rate of outmarriage.⁶

Marriages between the islands are rare and have stayed virtually constant over time. Between 5% and 10% of marriages match brides and grooms from different locales, including nonresidents.

Interethnic marriage has increased from 1950 to 1983, yet the increases are less striking than one might have expected. Moreover, the rate of interethnic marriage has remained essentially stable since 1960, when 37% of marriages were contracted between brides and grooms of different

TABLE 1. TRENDS IN OUTMARRIAGE FOR FIVE MARITAL CHARACTERISTICS, HAWAII, 1950-1983

| Year | Age ^a | Occupation ^b | Prior Marital Status ^c | Race ^d | Residence ^e |
|------|------------------|-------------------------|-----------------------------------|-------------------|------------------------|
| 1950 | — | — | — | .30 | — |
| 1955 | .61 | — | — | .31 | — |
| 1960 | .63 | .88 | .22 | .37 | .08 |
| 1965 | .59 | .87 | .19 | .38 | .08 |
| 1970 | .55 | .86 | .20 | .34 | .10 |
| 1975 | .60 | .82 | .26 | .40 | .07 |
| 1980 | .59 | .78 | .26 | .38 | .06 |
| 1983 | .62 | .76 | .28 | .35 | .06 |

Note: Data calculated from Annual Reports, Department of Health, Hawaii.

^aAge categories: 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-50, 51-55, 56-60, 61-65, 66-70, 71-75, over 75.

^bOccupation categories: no occupation; professional, technical and kindred; farmers, managers, and officials; clerical and kindred; sales workers; craft, foremen; operatives; private household; farm laborers; laborers except farm; armed forces.

^cPrevious marital status categories: never married; widowed; divorced; annulled.

^dRace includes ethnic and racial categories: Caucasian; Hawaiian; part-Hawaiian; Chinese; Filipino; Japanese; Puerto Rican; Korean; Samoan; black; Portuguese; Vietnamese; other.

^eResidence categories: counties of Hawaii; of Honolulu; of Kauai; of Maui; nonresidents.

TABLE 2. TRENDS IN OUTMARRIAGE BY RACE AND ETHNICITY, HAWAII, 1950-1983

| Year | Cauc | Hawn | ParH | Chin | Fili | Japa | PueR | Kore | Samo | Blac | Port | Viet | Oth |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Brides | | | | | | | | | | | | | |
| 1950 | .15 | .74 | .59 | .41 | .24 | .17 | .60 | .73 | — | — | — | — | .44 |
| 1955 | .14 | .80 | .57 | .41 | .37 | .19 | .58 | .73 | — | — | — | — | .61 |
| 1960 | .20 | .66 | .57 | .53 | .47 | .24 | .62 | .83 | — | .33 | — | — | .62 |
| 1965 | .24 | .80 | .55 | .59 | .51 | .65 | .70 | .81 | .50 | .12 | — | — | .73 |
| 1970 | .17 | .90 | .57 | .67 | .46 | .36 | .76 | .81 | .43 | .90 | .86 | — | .81 |
| 1975 | .22 | .78 | .57 | .67 | .49 | .42 | .77 | .88 | .38 | .14 | — | — | .79 |
| 1980 | .19 | .87 | .59 | .64 | .52 | .44 | .73 | .79 | .36 | .20 | .84 | .54 | .63 |
| 1983 | .16 | .83 | .60 | .61 | .57 | .50 | .80 | .79 | .41 | .17 | .83 | .55 | .65 |
| Grooms | | | | | | | | | | | | | |
| 1950 | .28 | .76 | .39 | .35 | .37 | .07 | .50 | .65 | — | — | — | — | .73 |
| 1955 | .36 | .78 | .38 | .45 | .44 | .08 | .50 | .71 | — | — | — | — | .74 |
| 1960 | .38 | .83 | .44 | .51 | .52 | .14 | .61 | .80 | — | .53 | — | — | .55 |
| 1965 | .34 | .84 | .46 | .61 | .51 | .20 | .70 | .71 | .40 | .49 | — | — | .80 |
| 1970 | .18 | .73 | .67 | .64 | .45 | .25 | .74 | .76 | .46 | .45 | .79 | — | .81 |
| 1975 | .28 | .84 | .54 | .63 | .48 | .36 | .78 | .67 | .46 | .62 | — | — | .76 |
| 1980 | .27 | .92 | .57 | .60 | .44 | .39 | .79 | .51 | .36 | .56 | .86 | .52 | .66 |
| 1983 | .22 | .90 | .56 | .60 | .47 | .41 | .86 | .51 | .42 | .49 | .84 | .19 | .73 |

Source: State of Hawaii, Department of Health, Vital Statistics, Annual Reports.

Note: Race categories are those used in Vital Statistics, and include categories otherwise generally given ethnic labels.

ethnic groups. Part of the reason for this slower-than-expected growth in interracial marriages has to do with the growth of the Caucasian population in Hawaii. Caucasian grooms are least likely to marry brides from other ethnic groups; this tendency is especially true of Caucasians in the military. Intermarriage rates for civilian Caucasians are nearly double those for Caucasians in the military. The Caucasian proportion of grooms rose from 31% in 1950 to 50% in 1970; the proportion of Caucasian brides grew from 22% in 1950 to 50% in 1970. Through the Vietnam War this increase in part reflected the growth of military marriages, while subsequently immigration from the mainland has maintained the high proportion of Caucasian brides and grooms. The growth of the nonmilitary Caucasian population remains the single most striking demographic change in the Hawaiian marriage pool in this period, coinciding with Hawaii's acquisition of statehood. This group also depressed the overall rate of intermarriage, but by less than if the increase were solely of military personnel.

Table 2 considers the rates of intermarriage for each ethnic group separately. The largest increase in intermarriage rates is evident for Japanese brides and grooms, who had .17 and .07 probabilities of intermarriage respectively in 1950. These rates soared to .50 and .41 respectively by 1983. Hawaiian, part-Hawaiian, Chinese, Filipinos, and Puerto Ricans all experienced less dramatic increases in intermarriage. Intermarriage for brides did not increase for part-Hawaiians, declined for Samoans, and increased only slightly for Koreans.

Intermarriage for grooms declined for Koreans and blacks, but held constant for Samoans, blacks, and Portugese.

Intermarriage for Caucasians increased, then subsequently declined. Intermarriage peaked in 1965 for brides at 24%, while Caucasian grooms were more likely to intermarry, as 38% of them did in 1960. Particularly striking about Caucasian intermarriage is how much more intermarriage there is in Hawaii than on the mainland. In 1983, 22% of Caucasian grooms and 16% of Caucasian brides were marrying non-Caucasian spouses, a figure far in excess of the less than 1% for either group on the mainland. Perhaps no other single figure so graphically underscores the importance of group proportions in influencing intermarriage as this comparison between Caucasians on the mainland versus those in Hawaii. Overall in Hawaii in 1980, 24.9% of adult Caucasians were married to non-Caucasian spouses.⁷

The outmarriage rates for different groups and the change in these rates over time in part reflect differences in the size of the groups. A consideration of outmarriage rates for different ethnic groups thus brings us to a consideration of Blau's hypotheses regarding the effect of group size and degree of social heterogeneity upon intermarriage.

Table 3 reports the correlations of group size and outmarriage for each of the five marital categories considered. In four of the five—age, prior marital status, race, and residence—the relative size of the group is inversely related to the proportion marrying outside the group. Thus the Koreans are more likely to marry outside the

TABLE 3. CORRELATION OF SIZE OF GROUP AND INTERMARRIAGE, HAWAII, 1950-1983

| Size of Group | Age | | Occupation | | Prior Marital Status | | Race | | Residence | |
|---------------|-------------|------|------------|------|----------------------|------|---------|------|-----------|------|
| | Outmarriage | | | | | | | | | |
| | b | g | b | g | b | g | b | g | b | g |
| Brides | -.45 | -.85 | .42 | -.95 | -.82 | -.77 | -.60 | -.49 | -.25 | -.25 |
| Grooms | -.48 | -.64 | -.66 | .04 | -.82 | -.76 | -.63 | -.46 | -.24 | -.24 |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Out—b | 69.3 | 13.1 | 68.9 | 22.9 | 51.3 | 28.8 | 55.0 | 22.8 | 9.4 | 9.3 |
| Size—b | 7.7 | 10.9 | 9.1 | 11.0 | 25.0 | 28.0 | 8.8 | 12.4 | 19.9 | 24.1 |
| Out—g | 76.5 | 18.4 | 80.0 | 17.8 | 49.7 | 29.2 | 50.0 | 24.2 | 9.3 | 8.8 |
| Size—g | 7.7 | 10.2 | 9.1 | 6.0 | 25.0 | 28.0 | 8.8 | 13.1 | 20.0 | 24.1 |
| | n = 169 | | n = 132 | | n = 48 | | n = 171 | | n = 60 | |

Note: Data for all groups are for 1960, 1965, 1970, and 1975-1983. In addition, age data are included for 1955, and race data for 1950, 1953, and 1955. Explanations of categories are given in Table 1.

group than the Chinese or Japanese because the Korean population in Hawaii is much smaller than the Chinese or Japanese. This pattern holds for both brides and grooms, whether one measures the size of the group by the same-sex measure or by the opposite-sex measure. The size of the group of brides is negatively correlated with the outmarriage rates for grooms and vice versa. For these four variables, then, the size hypothesis holds. This finding matches closely those of Schmitt on group size and outmarriage in Hawaii (Schmitt, 1965).

The exception to this pattern is occupation. This is due to the fact that "no occupation" is one of the main categories for women. Virtually all the women in this category marry out, thus confounding the usual pattern that members of large groups tend to marry in the group. The same anomaly for men is due to the scarcity of women in the military, again, one of the largest occupa-

tions for men. When one looks only at the opposite-sex measures of size, the negative correlation reemerges.

The results in Table 3 reflect size of group based on the distribution of marriages, not on the distribution of the population. Table 4 presents the same correlations with the size of the groups measured from census data for 1950, 1960, 1970, and 1980, rather than from vital statistics. The results for the marital variables on Table 4 match the direction of those on Table 3, indicating that the measurement of the size of the marrying population does not significantly bias the results obtained.

Table 5 presents the correlations between heterogeneity and outmarriage. In this case, we are relating a single index of heterogeneity for each year to the outmarriage rate for the entire population of brides and grooms. The analysis examines whether changes in heterogeneity over

TABLE 4. CORRELATION OF SIZE OF GROUP AND INTERMARRIAGE, FROM CENSUS DATA FOR GROUP SIZE AND FROM VITAL STATISTICS FOR MARRIAGE DATA

| Size of Group | Age | | Occupation | | Prior Marital Status | | Race | | Residence | |
|---------------|-------------|------|------------|------|----------------------|------|--------|------|-----------|------|
| | Outmarriage | | | | | | | | | |
| | b | g | b | g | b | g | b | g | b | g |
| Females | -.18 | -.52 | .41 | -.83 | -.88 | -.89 | -.30 | -.70 | -.43 | -.49 |
| Males | -.28 | -.63 | -.16 | -.38 | -.94 | -.95 | -.40 | -.71 | -.41 | -.47 |
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Out—b | 70.0 | .12 | 69.4 | .24 | 43.8 | .25 | 39.3 | .19 | 10.69 | .07 |
| Size—f | 7.7 | .04 | 9.1 | .16 | 33.3 | .24 | 16.8 | .13 | 25.0 | .33 |
| Out—g | 74.1 | .18 | 81.2 | .18 | 42.6 | .23 | 44.1 | .17 | 9.29 | .05 |
| Size—m | 7.7 | .04 | 9.1 | .08 | 33.3 | .38 | 16.7 | .12 | 25.0 | .35 |
| | n = 39 | | n = 18 | | n = 9 | | n = 24 | | n = 12 | |

Note: For categories employed, years covered, and comparability of categories in two sets of data, see footnote 4 and text.

TABLE 5. CORRELATION OF HETEROGENEITY AND OUTMARRIAGE

| | Age | | Occupation | | Prior Marital Status | | Race | | Residence | |
|---------------|--------|-----|------------|-----|----------------------|-----|--------|-----|-----------|-----|
| | Mean | SD | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Heterogeneity | | | | | | | | | | |
| Brides | .70 | | -.95 | | .82 | | -.28 | | -.35 | |
| Grooms | .68 | | -.51 | | .81 | | -.42 | | -.31 | |
| Out-marriage | | | | | | | | | | |
| Het—b | 60.8 | 2.1 | 80.6 | 4.0 | 26.1 | 4.4 | 35.7 | 3.1 | 6.8 | 1.3 |
| Het—g | 76.8 | 2.5 | 77.7 | 3.6 | 44.4 | 5.3 | 73.8 | 2.8 | 51.8 | 8.1 |
| | 78.9 | 3.1 | 87.1 | 1.5 | 44.3 | 6.0 | 71.8 | 3.5 | 51.4 | 9.6 |
| | n = 13 | | n = 12 | | n = 12 | | n = 15 | | n = 12 | |

Note: For categories employed and years covered, see notes on Table 1.

time are correlated with changes in the rates of outmarriage.

Heterogeneity is positively related to outmarriage, as Blau predicts, for age and prior marital status. The results for occupation, race, and residence appear to contradict this pattern. Blau's structuralism, then, is insufficient by itself to account for trends in outmarriage over time.

The analysis presented on Table 6, however, attempts to preserve the valuable elements in Blau's analysis by adding a variable to control for cultural changes in the acceptability of outmarriage. We entered outmarriage as the dependent variable in a regression equation, with heterogeneity and year as independent variables. The variable "year" will capture any trend in the acceptability of outmarriage once changes in heterogeneity are taken into account. In the regression equations on Table 6, heterogeneity is positive in 4 of 5 cases, the sole exception being that for occupation.

The ethnicity analysis is of particular interest. Ethnic heterogeneity declined in Hawaii over the 1970s, as the strong negative correlation between

year and heterogeneity reveals: $r = -.81$ for brides and $-.91$ for grooms. The historic trend toward increase in intermarriage, then, was blunted by the increase in size of the largest group, the Caucasians, as these are the ones least likely to intermarry. The two-variable equation in Table 6 reveals that heterogeneity is positively associated with intermarriage and that there is a secular trend toward increased acceptability of intermarriage in Hawaii. Once one recognizes the decline in heterogeneity, the pattern of intermarriage in the 1970s and 1980s becomes understandable.

In pursuing this multivariate vein, we examined vital statistics data that cross-classified marriages by race and age, as well as by race and occupation. The rate of interethnic marriage in 1980 is highest for the youngest groups for both brides and grooms, and declines steadily with age, as indicated on Table 7. This finding closely parallels Schmitt's report of fewer interethnic marriages for older individuals in 1962. The rate of interethnic marriages in 1980 is not closely related to occupational status, a notable change from earlier patterns (Schmitt, 1971). The rate of interethnic

TABLE 6. REGRESSION ANALYSIS PREDICTING OUTMARRIAGE BY HETEROGENEITY

| | Age | | Occupation | | Prior Marital Status | | Race | | Residence | |
|-----------|--------|--------|------------|--------|----------------------|--------|--------|--------|-----------|--------|
| | b | (SE) | b | (SE) | b | (SE) | b | (SE) | b | (SE) |
| Brides | | | | | | | | | | |
| Intercept | -.12 | (.13) | 1.34* | (.12) | -.07 | (.09) | -6.66* | (.20) | .22* | (.03) |
| Het—b | 1.14* | (.21) | -.29* | (.29) | .50 | (.41) | 1.00* | (.22) | .21* | (.06) |
| Year | -.002* | (.001) | -.004* | (.002) | .001 | (.003) | .004* | (.001) | -.003* | (.001) |
| Grooms | | | | | | | | | | |
| Intercept | .02 | (.11) | 1.54* | (.15) | -.04* | (.11) | -.91* | (.19) | .25* | (.02) |
| Het—g | .93* | (.19) | -.39* | (.19) | .41 | (.41) | 1.23* | (.21) | .22* | (.03) |
| Year | .002* | (.001) | -.005* | (.001) | .002 | (.003) | .005* | (.001) | -.004* | (.001) |
| | n = 13 | | n = 12 | | n = 12 | | n = 15 | | n = 12 | |

Note: For categories employed and years covered, see notes on Table 1.
* $p < .05$.

TABLE 7. OUTMARRIAGE ACROSS RACE AND AGE, AND RACE AND OCCUPATION

| A. Interethnic Marriage by Age of Brides and Grooms, 1980 | | | | |
|---|--------|--|--------|--|
| Age | Brides | | Grooms | |
| 15-19 | 38.6% | | 41.6% | |
| 20-24 | 39.4 | | 40.3 | |
| 25-29 | 36.9 | | 37.7 | |
| 30-39 | 33.3 | | 35.1 | |
| 40 & > | 23.1 | | 24.7 | |

| B. Interethnic Marriage by Occupation of Brides and Grooms, 1980 | | | | |
|--|--------|--|--------|--|
| Occupation | Brides | | Grooms | |
| Professional, managerial | 31% | | 32% | |
| Other white-collar | 35 | | 37 | |
| Craft | 40 | | 31 | |
| Laborers | 32 | | 38 | |
| Military | 32 | | 21 | |
| None | 39 | | 42 | |

| Size of Group | Race-Age (1980) (n = 42) Outmarriage | | Race-Occupation (1980) (n = 35) Outmarriage | |
|---------------|--|--------|---|--------|
| | Brides | Grooms | Brides | Grooms |
| | Brides | -.21 | -.40 | -.41 |
| Grooms | -.41 | -.31 | -.46 | -.60 |

outmarriage is about the same for professional brides, professional grooms, craft grooms, and laborer brides. Military grooms have the lowest rates of interethnic marriage (21%).

We tested the relationship between size and intermarriage for these detailed data. Having analyzed only one year we were unable to conduct an analysis of heterogeneity and intermarriage. For race and age in 1980, the size of the group is negatively correlated with the proportion marrying out, as indicated on Table 7. For race and occupation in 1980, the size of the group is negatively correlated with the proportion marrying out. These results confirm Blau and colleagues' (1984) findings that group size maintains an influence even when multiple group characteristics are considered simultaneously.

DISCUSSION

Blau's theory of social structure is built on conceptions of structure that use as primitive elements relative size and variations in the number of groups to describe heterogeneity; when focusing on inequality, the elements are distributions of people and resources among strata. A further structural property is located at group boundaries; the degree of social difference is explained by the amount of group boundary cross-cutting.

The findings presented here on intermarriage support Blau's predictions regarding the effect of group size and heterogeneity on intermarriage. The larger the group, the smaller the rate of intermarriage, whether the groups are age cohorts,

ethnic groups, residential communities, occupation groups, or people with the same marital status. Further, the more heterogeneous the opposite sex, the more outmarriage will be observed. Blau's predictions also hold in a multivariate context, when interracial marriage is examined across age and occupational lines.

These results are notable in that they demonstrate the applicability of Blau's theory in perhaps the most diverse setting available. Blau and colleagues have obtained evidence consistent with their approach in U.S. cities where interracial marriage is extremely rare. We have shown that the same propositions hold when intermarriage is extremely common.

The data also indicate that, while Blau's predictions are true at any particular time, they are insufficient to predict trends over time in intermarriage. For all of the variables except prior marital status, there are significant trends in intermarriage which are not accounted for by changes in the size or heterogeneity of the groups.

While we are only able to measure cultural change indirectly, the evidence suggests that cultural change and structural change are both important in explaining changes in Hawaiian marriage patterns. The growth of the Caucasian population tended to depress intermarriage rates, while the cultural predisposition to intermarry increased during the period studied.

We find that Hawaiian society is continuing to "melt," in that there is a continued increase in the cultural acceptance of intermarriage. Our analysis

shows that the stabilization of intermarriage rates in Hawaii is a simple by-product of the sharp growth of the Caucasian population. Once this demographic trend is accounted for, intermarriage is shown to be increasingly acceptable.

Blau's structural theory has also supplied a useful directive for the study of intermarriage in a multivariate context. Since his theory views social structure as "multidimensional space of different social positions among which a population is distributed," (Blau, Blum, and Schwartz, 1982: 46) attention is focused on the intersection of such positions as age, sex, socioeconomic status, mother tongue, or birth region. This view of social structure suggests that procedures be used which examine homogamy for any given population along several of these dimensions. The evidence indicates that Blau's model continues to apply when several dimensions of social differentiation are considered simultaneously.

Although it has not been a concern of this analysis, it is obvious that resources are not distributed equally across these groups, especially across age, ethnic, and occupational categories. Nor should we assume that marriage choices are independent of the present and future resources of each of these groups. A different investigation entirely would be needed to take into account inequalities in power and their effect on intermarriage.

We have thus reached the conclusion that both structural and cultural factors are necessary to explain trends in intermarriage in Hawaii. We expect that as group size and heterogeneity are studied in a variety of places in longitudinal research that incorporates measures of changing group dispositions to intermarriage, we will understand more about the basic processes by which groups grow or decline, and populations remain separate or tend to become mixed.

FOOTNOTES

1. Special cross-tabulations of race were obtained from the Research and Statistics Office of the Department of Health of the State of Hawaii. We thank them for their generosity in making these data available to us.
2. The number of ethnic categories used for vital statistics had to be reduced to take into account the smaller number used to report data earlier. Further, Hawaii Vital Statistics for 1950 have no figures for blacks, so the ratio of 1 black bride and 2 black grooms was used, taken from the first year that listed blacks separately (1960 gave 0.4% black marriages, with outmarriage of 33 for brides and 52 for grooms).

3. For example, the State of Hawaii Data Book (1981) uses "race" (p. 36) and "ethnic stock" (p. 38) for the same list of categories, in the first case citing the U.S. Census and in the second, the Hawaii Department of Health.
4. Both census and vital statistics occupational data were collapsed into 10 roughly similar categories. The "not in labor force" figures are least comparable. Further, occupational categories varied from census to census. Using census population figures for the counties of the state of Hawaii required dropping nonresidents from vital statistics (nonresidents account for roughly 20% of the brides and grooms) and regrouping residents into four counties. The census data used for prior marital status exclude currently married, although some of those married at the time of the census may have become widowed or divorced within the year. Age categories were identical. Vital statistic race categories were collapsed to match the six census categories. Census identifications are based on self-enumeration rather than enumerator's observation (from 1960 on) and on race of mother (from 1980 on) rather than of father (Statistical Abstract 1984: 3).
5. In 1960, 44.3% of brides were listed as having no occupation; by 1983 this proportion had declined to 28.6%. Occupational segregation by sex declined during this period from 63.2 to 39.8. These two factors contributed to declines in occupational outmarriage.
6. A paradoxical finding is not inconsistent with this pattern: divorcees are increasingly likely to marry other divorcees as the pool of eligible divorced spouses increases. In 1983 over 60% of previously divorced brides married previously divorced men, a rise of slightly over 17% from 1960.
7. Special tabulation of 1980 census data.

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