

Uneven Growth in the Enumerated Native Hawaiian Population*

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ABSTRACT

The enumerated Native Hawaiian population increased remarkably between 1990 and 2000. Who are the new Native Hawaiians? I use demographic techniques to develop a picture of the age, gender, educational attainment, and birthplace patterns within this new element of the Native Hawaiian population. The analyses reveal demographic correlates of changing racial identification. I am particularly interested in learning whether it is possible that every surviving person who reported Native Hawaiian in 1990 reported single-race Native Hawaiian in 2000. If the population numbers do not support this possibility, then the analyses would provide evidence that multiracial Native Hawaiians must be included in cross-time analyses of this population. This analysis will also provide policy-relevant information about ways in which the Native Hawaiian population has changed and may continue to grow.

INTRODUCTION

With the new “check all that apply” race question used in Census 2000 comes a vast change in the recorded composition of some racial groups, but research about changes in population characteristics depends on the comparability of populations across years. A variety of researchers are anxious to study changes over time in population sub-groups. At the same time, other sociologists and demographers have learned that people are not always consistent in their reports of their race(s) and their ancestries (Lieberson and Waters 1993; Snipp 1989; Waters 1990; Harris and Sim 2002). These issues are increasingly thrown into conflict as the individual-level data from Census 2000 is used to study the groups whose size and composition have been most affected by changes in the way the race question was asked.

Early tabulations show that the number of Americans who reported at least one of their races to be Native Hawaiian jumped from **x** in 1990 to **x** in 2000, with about **x** percent of the 2000 Native Hawaiian population also reporting another race (see Table 1). Though all race/ethnic groups saw substantial changes in population size, this is one of the largest proportional increases in population size of any American race/ethnic group between 1990 and 2000. By focusing on the tremendous changes in this small but important population, I hope to provide guidance for demographers and sociologists in navigating the surprising new terrain of quantitative data on race groups.

TABLE 1 ABOUT HERE

The distinction between racial identity and reported race(s) is important. Racial identity is malleable, internal, and sometimes contested. As Tajfel (1981) wrote, an ethnic identity is the ethnic part of a social identity, which is “that part of an individual’s self-concept which derives from his knowledge of his membership of a social group together with the value and emotional

significance attached to that membership.” In contrast, a person has one opportunity (if any)¹ to report their race(s) on a census questionnaire. Standard categories are presented and fine distinctions are lost.

Native Hawaiian racial identity can be especially difficult to measure well in surveys, given the ethnic diversity found in many Native Hawaiians’ family trees. Although racial identity is not always well-captured in measures of racial identification, Census 2000 offered a more nuanced race question than have past censuses. In this research, I examine the reported race (or “racial identification”) of individuals who report Native Hawaiian as their race on the 1990 or 2000 Censuses. Racial identification is important to understand inasmuch as it improves the chances of prudent use of information about the newest and largest sample of Native Hawaiians – Census 2000.

OUTLINE OF ANALYSIS

In this analysis, I group the enumerated Native Hawaiian population of 1990 into sub-populations based on age, gender, education, and birthplace. After adjusting for mortality and aging, I compare the expected size of each sub-population to the size of the enumerated Native Hawaiian population in 2000 with the same characteristics. This exercise has two key aims. The first aim is to assess whether the “Native Hawaiian only” population in 2000 could possibly contain the entire 1990 Native Hawaiian population. If it cannot, then this provides evidence of an extremely complex pattern of change in racial identification. The second aim of this analysis is to identify sub-populations that experienced especially large or especially small levels of change between 1990 and 2000. Although small changes in these characteristics are to be

¹ Anyone in the household (or, indeed, anyone at all) can complete all or part of the census questionnaire.

expected, the massive changes in the total population size mean that some of the detailed changes are sure to be large. To conclude the analysis, I present a comparison of the characteristics of Native Hawaiians who marked only one race in 2000 to characteristics of Native Hawaiians who marked more than one race in 2000, showing related statistics for 1990 as well. This comparison highlights the bias researchers introduce when they divide the population into race groups such that Native Hawaiians with two or more races were grouped with all people of two or more races instead of with other Native Hawaiians. It also clarifies some of the changes across the decade in the characteristics of all of the Native Hawaiian populations.

The overall purposes of this exploration of recent changes in the Native Hawaiian population are several: to shed light on what might be happening in other race/ethnic groups with substantial mixed-race populations; to draw attention to some of the effects of changing the format of the race question; to aid researchers in discerning options for data analysis; and to highlight areas where further research into changing racial identification is warranted.

THE SIZE AND SOURCES OF POPULATION CHANGES BETWEEN 1990 AND 2000

The total U.S. Population grew by 13.2 percent between the 1990 and 2000 Censuses, but the difference in population size between 1990 and 2000 is larger for some race/ethnicity groups than for others. The size of the white population (whether white race was reported alone or in combination with other races) increased by only 8.6 percent between 1990 and 2000, while the Black/African American population (alone or in combination) increased by 21.4 percent. There was a 57.9 percent increase in the size of the Hispanic/Latino population of any race, and the size of the Asian population (alone or in combination) grew by a substantial xx percent across the decade. Indigenous populations grew tremendously: the American Indian/Alaska Native

population (alone or in combination) increased by 110.3 percent and the Native Hawaiian and other Pacific Islander population increased by **XX** percent (Census Bureau, DP-1 1990 and DP-1 2000). Clearly the change in America's measured racial landscape was widespread. While growth in the Native Hawaiian population is especially large, other groups also experienced substantial changes.

Some of the population growth was due to natural increase (see Martin et al., 2002). Of the **xxx,xxx** Native Hawaiians in 2000, about **xx,xxx** are under age 10. These children are as likely as the rest of the population to be considered multiracial: **xx** percent of them were reported to have more than one race, compared to **xx** percent among Native Hawaiians ages 10 and older. The analyses presented in this article exclude children who were under 10 years old in 2000 and focus instead on population changes due to other factors.

Some of the increase in the Native Hawaiian population size is probably due to international immigration. However, international emigration of Native Hawaiian is probably relatively small; specific counts are not published.

Although the Native Hawaiian population in 1990 was **xxx,xxx**, the expected population size of Native Hawaiian aged 10 and older in 2000 is **96.2** percent of the 1990 count because of mortality (National Center for Health Statistics 2002, Table 30). For this and all other estimates of the expected population size in 2000, I applied age-, sex-, age-, and year-specific mortality rates (National Center for Health Statistics 2002, Table 30) to the 1990 Census 5 percent public use microdata (PUMS).² Some subpopulations will have different rates because of differences in

² The expected population size is **xxx,xxx** using the 1990 Census 5% PUMS data as a basis and is **xxx,xxx** using the 1990 Census Summary File 1 data. I use the PUMS data so that I can divide the population by educational attainment and birthplace, as well as age and sex.

age-specific or location-specific mortality, but mortality rates are not available at this level of detail so I could not include them.

CHANGES IN SUB-POPULATIONS: EXPECTATIONS BASED ON PRIOR RESEARCH

Because they are relatively unlikely to change in unpredictable ways, I focus my analyses on changes in sub-populations as distinguished by age, gender, educational attainment, and birth place. Prior research suggests that some people are more likely to change their racial identification than are others. Changes in identification along regional lines have also been found in the past (Eschbach 1992); I focus on changes the number of Native Hawaiians reporting particular birthplaces to tap into regional changes while avoiding issues of inter-regional migration.

Gender: Studies focusing on multiracial youth have found that girls are more likely to report a mixed heritage than are boys. Corrin and Cook (1999) found this to be true among young people of black-white heritage. Harris (2002) focused on youth who are American Indian and white and found that girls are significantly more likely than boys to report both races (as opposed to white race only) when asked in a written survey at school; when asked in an in-person interview at home, however, girls and boys were not significantly different in their reports. Both of these studies suggest that, given the opportunity (as they were on the Census 2000 questionnaire), young women will be more likely than young men to report more than one race. This may be true regardless of what single race the individuals reported in 1990; if so, we may see an especially large “Native Hawaiian in combination with other races” population among young women who reported Native Hawaiian alone or another race alone in 1990. Unfortunately, neither study informs us about whether older women are more likely than older

men to report multiple races. To investigate this issue, I report population changes by age and gender, as well as by gender alone.

Age: Many studies of the identities of mixed race people have focused on children, adolescents, or young adults because these ages are considered especially important for identity development (see Erickson 1963, 1968 and Phinney 1992) and/or because of data constraints (e.g., Corrin and Cook 1999; Harris and Sim 2001; Lysne and Levy 1997; Twine 1997; Xie and Goyette 1998). Overall, the observed effects of age on identity and identification are not consistently in a certain direction. Harris and Sim (2001) found that black-white adolescents over age 16 were significantly less likely to report white as their primary identity, but that the effect of age was not significantly related to primary race choice among white-American Indian or white-Asian adolescents. Harris (2002) found that, among adolescents of white and American Indian heritage, older teens were significantly more likely than younger teens to report that their race was white only (as opposed to American Indian only) when asked in a written survey at school. And Xie and Goyette (1997) found that children with one Asian parent who were ages 5 through 9 were more likely to be identified as Asian (rather than their other parent's race) than were younger children. Children ages 10 through 14 were not significantly different from the youngest group, however.

Because identity research has focused on the younger age range, it is unclear what levels or patterns of identity change we should expect in later ages. Phinney (1989) suggests that only the first stages of identity development are usually achieved in adolescence and that further exploration in later years is relatively common. However, she does not have specific predictions about the outcomes of these explorations for people with mixed-race heritage. In general, the

lack of focus on the older ages implies that identity expected to be substantially more stable in later-adulthood than in childhood or adolescence.

Educational Attainment: Eschbach et al. (1998) explored the sources of great increases in the educational attainment of the American Indian population between 1970 and 1990, and concluded that people who had changed their racial identification to American Indian in the 1980 and 1990 Censuses were more educated than the American Indian population in prior decades. A parallel trend may be true in 2000 among Native Hawaiians; the racially part-Native Hawaiian population may show increases in the population with high levels of education. Reasons for identity changes at higher levels of educational attainment are unclear. Thus, it is difficult to predict whether any growth would focus primarily in the “Native Hawaiian alone” group, the “Native Hawaiian in combination” group, or proportionally in each.

Birthplace: In his study of regional variation in patterns of identification as American Indian using the 1980 Census, Eschbach (1992) found that the growth in the American Indian population was concentrated in Eastern and Pacific Coast states, especially in places away from reservations. After extensive analysis, he concluded that inter-state migration did not account for the changes, but instead the growth was from changes in racial identification. “Old Indian areas” – states with reservations or other American Indian ethnic communities – experienced much more stability in their American Indian populations. If the situation of Native Hawaiians is similar, the state of Hawaii would exhibit relatively little increase in its Native Hawaiian population relative to other states.

The existence of interstate migration complicates the analysis, however. To avoid this complication, I focus on the birth places of Native Hawaiians (1990 vs. 2000) to find birth states with exceptionally large or small changes in the number of Native Hawaiians reporting being

born there. A large percentage of people still live in the state of their birth; in 2000, 60 percent of the entire U.S. population lived in the state in which they were born (Census 2000 SF-3: Tables PCT63C and P21). I use birth state instead of current state of residence to avoid issues of changes in population size due interstate migration.

The population changes by birth state may be parallel to the regional changes reported by Eschbach to the extent that people remain in their birth state. This will especially be true for younger cohorts. However, Eschbach (1992) also found that migration away from a person's state of birth may affect his or her identification as racially American Indian versus ancestrally American Indian (Eschbach 1992: Ch. 6). This is because "The regional differences in these rates [of identification as American Indian] reflect regional differences in the local community context supporting a personal identification as American Indian" (Eschbach 1992:174). Identity reports by birth state are subject to changes due to migration, as well as other factors. Thus my study of changes in identification by birthplace can be best used to highlight areas for future research in which current residence and migration history are also taken into account.

DATA AND METHODS

Precisely because they are censuses and not samples, decennial census surveys provide a valuable tool for exploring the race and ancestry reports of small, diffuse groups like Native Hawaiians. Data from 1990 and 2000 Census Summary Files are useful for basic information about the Native Hawaiian race population. In cases where the data are not available in summary files, I use the 1990 and 2000 Census 5-percent Public Use Microdata (accessed through usa.ipums.org/usa).

There is some error introduced into the 2000 and 1990 PUMS estimates because they are based on weighted samples. Therefore, I include standard errors for my point estimates of sub-population size in both 1990 and 2000. The variance of estimated totals (\hat{X}) can be calculated using the following formula:

$$\text{var}(\hat{X}) = \left(\frac{t}{t-1} \right) \sum_{g=1}^t \left[x_g - \frac{1}{t} \left(\sum_{g=1}^t x_g \right) \right]^2 \quad (1)$$

where the microdata sample is divided into t random groups ($t = 100$) and x_g is the weighted microdata sample total of the characteristic of interest from the g^{th} random group. I report the standard error (the square root of the variance) of each estimated total. See the 1990 Census Technical Documentation (1992, Ch.3) for details on this and related formulas. For readability, the figures and table presented in the body of the article represent the “best guess” for a population’s size and do not include these standard errors. Standard errors are included in the appendix table.

RESULTS

Changes in the Demographic Composition of the Native Hawaiian Population

I have not yet conducted the proposed research. It is a replication of a similar paper on American Indians which has complete results and will be submitted to a journal in fall 2007. Results of the Native Hawaiian paper will be available in March 2008 if the paper is accepted to a PAA session. Please contact me if you have any questions: lieblier@umn.edu .

Please note: to the extent possible with the available data, I will include people who reported Native Hawaiian ancestry in either census year to better understand the decision to report a second race in the ancestry question rather than the race question.

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