Overlap: A Guide to Race and Hispanic Origin in Census 2000

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Table of Contents

Acknowledgements

1
Introduction

On March 7, 2001, the *Washington Post* published preliminary figures from census 2000 and announced that the Hispanic or Latino population of the US had overtaken the black or African American population in size. Whereas the Latino population constituted 12.5 percent of the total US population, the black population share was only 12.3 percent. Or possibly the black share was 12.9 percent, by a different definition, and in that case Latinos were *fewer,* not larger, in number than blacks.

So was introduced the public's first encounter with the confusing world of racial statistics reported from census 2000. Racial groups were now recorded in ranges from minimum sizes—those who said they were a single race alone—to more inclusive, maximum sizes, based on those who said they were not only that race but also of other extraction as well. Which number was the correct or more appropriate choice for comparing the size of the African American population to the size of the Latino population?

Comparison of different population groups is plagued by a new issue of "overlap." An historic revision of the race question permitted a "check all that apply" option instead of the forced, single race selection required in previous censuses. Thus the same individual could be counted as part of more than one racial group, and the populations of different groups overlap one another, as shown in Exhibit 1.

In addition, the growing size of the Hispanic origin or Latino population necessitates closer consideration of how this dimension interacts with the racial question. Because the Hispanic question was asked separately in census 2000 from the racial question, individuals' identities also overlap racial and Hispanic origin categories (illustrated in Exhibit 1). Adding to the confusion above regarding relative sizes of the black and Latino populations, more than three-quarters of a million Americans, 0.3 percent of the total US population, said they were *both* black and Hispanic. How should these people be weighed in the comparison of the two groups—as members of the black racial group, as persons of Hispanic origin, or double counted as both?

A New Era in Racial and Hispanic Origin Statistics

Data users must confront a plethora of decisions and alternatives regarding race and Hispanic origin data issued from census 2000. Presentation and interpretation of the census results is much less deterministic than it has been in the past, requiring users to be much more sophisticated in their choices. Some might prefer to force-fit the racial and Hispanic origin counts into simpler categories that resemble those familiar from the 1990 census or before. But this cannot be done cleanly and accurately. Moreover, such a reduction runs roughshod over the complexities of race and Hispanic origin revealed by the new data. More considered choices are required.

This User Guide provides an introduction to the various possibilities for arranging and interpreting racial and Hispanic origin data. We offer an explanation that directly emphasizes the overlap between different racial and Hispanic origin categories. It is this "overlap" that creates the confusing array of presentations and interpretations.

All data presenters and interpreters are seeking a simplified way of handling the new data. Some wish to reduce the overall number of categories. Many want to fit the new data into the old categories used in 1990 and before. Others want to describe as many specific types of individuals as possible with the new data. And some wish to eliminate conflicting counts and interpretations that derive from different tabulation schemes. Unfortunately, these various purposes are at odds with one another and solutions adopted in accordance with one rationale impose biases and error with regard to other purposes. There simply exists a forest of alternatives amidst which data users will be easily lost.

Data users can benefit from a "map" of the alternatives so that they can find their way through the forest. We offer in this guide a view of the organizing rationale for the data, an overview of the alternative data formats being produced, and a decision tree for selecting one method or format from among the others.

Following chapters will develop in depth users' understanding of the overlap between categories, the various formats of data being produced by the Census Bureau, and the options for rearranging and interpreting those data. First we will offer an overview of alternatives by presenting a simplified decision framework.

Basic Decision Framework for Selecting Racial and Hispanic Origin Data

Many users are victims of two misassumptions: first, that one method of arranging the race and Hispanic data serves most basic purposes; and, second, that the format of data they first encounter is the only one available. A primary goal of this guide is to correct these two misassumptions. In reality, different formats from among the alternatives are appropriate to achieve alternative purposes.

Users need to make a series of key decisions in selecting an appropriate alternative.

Decision 1: <u>Primary interest in the 2000 data on race VERSUS primary interest in comparing 2000 to 1990 or before</u>. The change in the race question to allow respondents to select more than one race leads to different analysis of the 2000 data alone than if comparisons are intended to 1990. If 2000 is the focus, users can include a multiracial category and explore the multiracial combinations. If comparability over time is desired, a host of other decisions must be made about the method for "bridging" between 2000 and previous years.

Decision 2: <u>Primary interest only in race or only in Hispanic origin VERSUS interest in both</u>. Two separate questions were asked in census 2000 to solicit racial and Hispanic self-identification. Thus, users can explore the answers to those questions separately. The Hispanic/non-Hispanic classification is the simplest to use and the most identical between 1990 and 2000. The racial categories could also be analyzed alone. However, the respondents frequently report "Hispanic" answers into the racial question (and get coded as the miscellaneous "of some other race." In addition, users often want to treat Latino as equivalent to a racial group that is exclusive of other groups. Thus it is difficult to analyze race without integrating Hispanic origin, especially if persons of Hispanic origin represent more than 10% or so of the total population.

Decision 3: <u>Primary interest in just the major categories of race and Hispanic origin VERSUS interest in more detailed categories</u>. For many purposes, a broad summary description of the population in four or five major categories is all that is desired. In other cases, users may be interested in details of multiracial combinations or in more specific groups such as persons of Vietnamese race or Cuban Hispanic origin. Different tables provide alternative levels of detail.

Decision 4: <u>Primary interest in a single racial group or in comparisons of different groups VERSUS desire to sum the groups to a total equaling 100% of the population.</u> Overlap of individuals in multiple racial categories poses a major difficulty for those who assume the racial counts should total 100%. The only way for that to work is to extract all the multiple race individuals from each of their identified racial groups and lump them together as a residual total of those who selected multiple races. The number of monoracial and mixed race individuals then sums to 100%, but the count of each contributing race is reduced in size (because it includes only monoracial members). As an alternative the Census Bureau presents a different tabulation that counts in a racial category all individuals who select that single race alone or in combination with other races. This has the effect of "double counting" multiracial individuals and results in a total of all races that exceeds 100% but it may be a better description of each racial group. Data users have a choice.

Decision 5: <u>Primary interest in civil rights enforcement or political redistricting VERSUS desire for a social description of the population</u>. The first data released from census 2000 are for purposes of political redistricting and much of the initial analysis is couched in those terms, subject to legal guidelines from the Department of Justice. This sets much of the initial "tone" for how the data are to be understood, but more general treatment of race for purposes of social description need not be so constrained.

Decision 6: <u>Primary interest in governmental collection or provision of data for others to use VERSUS desire to analyze data for non-governmental purposes</u>. Much of the early discussion of the new race and Hispanic origin data has centered on how governmental agencies are directed to collect and format that data. The Office of Management and Budget has directed that certain minimum categories be collected and distributed, with an emphasis on providing information in as flexible a set of categories as possible. Users need to know about these directives because they shape what type of analysis is possible, but users are not held to the same standards and they may wish to combine data in ways not permitted to governmental agencies themselves.

In terms of Decisions 5 and 6, this Guide is addressed primarily to those who desire a social description of the racial and Hispanic make-up of the population and who wish to analyze data without the same narrow restrictions as government agencies. Nevertheless, the broader-based understanding presented by this Guide should prove useful to all who seek a deeper interpretation of racial and Hispanic data provided by the Census Bureau. In fact, governmental guidelines and restrictions may well flex as we all gain more experience with the limitations and potentials of the new data from census 2000.

A Note on Terminology

A series of alternative terms are used as approximate synonyms by the Census Bureau and in this guide. African American and black are used interchangeably, as are "persons of Hispanic origin" and "Latinos." In addition, it is useful to separate in concept the technical measurement instrument from the group of people being measured. For example, we speak of the "Hispanic origin question" asked on the census, which yields an Hispanic category. That category counts *people* who we term the Hispanic group, persons of Hispanic origin, or Latinos.

In data tabulation procedures, two categories may overlap, such as when persons share black and white racial identification, or black and Hispanic identification. In such cases, when individuals are sorted into exclusive categories under various programming alternatives, we speak of one group's *categorical dominance* over another. This should not be interpreted as a group's political, legal, or social dominance. Nonetheless, a major premise of this Guide is that counting procedures do in fact bear implications regarding other priorities. Accordingly, we seek a more conscious articulation of tabulation alternatives, their social implications, and their appropriate uses.

Remainder of this Guide

In following chapters we offer substantial detail and guidance about the use of racial and Hispanic origin data from census 2000. The rich and complex detail that is being released requires much more thorough understanding than was needed in prior decades. The final Section, 8, provides a decision tree and recommended set of methods for arranging the data.

First, we provide a primer on race and Hispanic identity in Section 2 that follows. Next we address the new data on multiracial persons that were collected in census 2000. Following that we delve into the overlap of Hispanic origin with racial categories. This is followed by Section 6 which summarizes the rich variety of alternative formats in which race and Hispanic origin data are reported from census 2000. Section 7 then describes a variety of ways for bridging between 1990 and 2000 when analyzing changes over time. A number of alternatives are highlighted for particular purposes in the decision tree offered in Section 8. Spreadsheet templates also are provided for most of these alternatives.

2
A Primer on Race and Hispanic Identity

A. Introduction

Scientists have largely abandoned the search for absolute biological distinctions between races (Gregory & Sanjek, 1994). Current research on human origins emphasizes common ancestors that branch off into separate subpopulations (Goldstein & Morning, 2000). By contrast, the concept of four "racial groups" (black, white, American Indian, and Asian), which have been used in the United States, rely on a view of separate, unmixed racial populations. Hence, before we explore what is meant by the problem of "overlap" or how to understand the new data on "mixed" or "multiraced" individuals, it is important to develop a working understanding of what we mean by race. In this section we overview the idea that race is socially constructed, along with a brief history of race in the United States census. Lastly, we explore issues of self-identification among multiracial individuals and the impact of the Hispanic category on shifting understandings of race in United States society.

B. Race as a Social Construction

Although race appears in social life as ubiquitous and omnipresent, the concept of race is problematic. In the past race was considered by scientists and common-folk alike to be a matter of "bloodlines." In other words, racial characteristics were considered to be "in the blood" and tied to an individual's ancestry as well as appearance. Today most scholars recognize that the meaning of race is socially constructed and politically contested (Omi & Winant, 1994), meaning that race is neither "mere illusion," and hence irrelevant, or something that is "fixed" and "objective." According to most sociologists, even though there are physical characteristics that one can point to in distinguishing among various groups, the physical differences are much less significant than are the social meanings, which are attached to them. Race is not seen by contemporary physical or social scientists as being rooted in biological differences between population groups. In fact, most researchers point out that there is often more variation within "racial" groups, than there is between those groups (Marks, 1994). Thus, race as a social phenomenon is distinct, although not entirely disconnected, from physical representation.

The social construction of race refers to the ways in which people, both individually and collectively, engage in a process of construction. Race is a matter of subjective attachments of the individual to a group – self-identification, as well as a reflection of institutional opportunities and outcomes – and identity. As such, race needs to be considered as something that is created-imagined, invented, and constructed in the context of specific historical and political struggles. Race acts as a proxy for a common set of historical experiences and contemporary interests (Guiner, 1995). What it means to belong to a race is created intertextually as part of an ongoing struggle (Hunt, 1997; Hall, 1988). Social events, both past and present, are key to the formation of any racialized context, and economic, political, and cultural factors continually shape definitions of race and racial groups (Omi & Winant, 1994). As such, the social meaning of race in the Unites States today, although different from past understandings, cannot be entirely disconnected from that history, and should be considered a process of racial formation (Omi & Winant, 1994).

C. The History of Race in the United States

In the United States the political discourse about race has long been fundamentally shaped by the definitions of who is "black" and who is "white" in American society (Davis, 1991). The black category has long been defined as someone with "any known black ancestry," otherwise known as the "one-drop rule" (Myrdal, 1944; Williamson, 1980; Davis, 1991). Anthropologists use the term hypo-descent rule to describe the one-drop rule and to elaborate the meaning to encompass a system whereby people with mixed ancestry are assigned the social status of the subordinate group (Harris, 1964). Although there has at various times been attempts to describe intermediate racial statuses with terms like "mulatto, quadroon, or octoroon," these terms have been merely descriptive of differing degrees of black ancestry and have never carried any legal or social significance. Notably, other racial groups in the United States context have not been subjected to the one-drop rule. These groups represent "intermediate" categories in the U.S. racial stratification schema (Hacker, 1992). The degree to which "racially-mixed" persons without black ancestry have been accorded the lower racialized status has been linked to both appearance and class. In general, these other groups of racially mixed people have been treated as assimilated after the first generation of "miscegenation" (Davis, 1991).

D. The History of the United States Census and It's Use of the Concept of Race

Beginning with the first census in 1790 the federal government has always measured race in some form, although the categories have changed over time, along with the rationales given for the collection of this information. Whites, blacks, and Indians have been designated as "separate races" from the inception of the republic. The census itself has been entangled in the nation's racial dilemmas from the beginning, when the U.S. Constitution instructed that slaves be "counted" as three-fifths of a person, to current debates over identity and representation (Anderson & Fienberg, 1999; Skerry, 2000). Indians "not taxed" were not to be enumerated, while those who "renounced tribal rule"

were to have their "color" described as Indian (Anderson & Fienberg, 1999). In 1870, the census initiated a new category for "Chinese," which was followed politically by the Chinese Exclusion Act of 1882. Japanese, Filipino, Hindu, and Korean categories were all added in response to successive immigration waves. In fact, some have argued that the history of the census attempts to classify the populace can be read as an ongoing debate over inclusion and exclusion of various parts of the population from full participation in the nation–state (Anderson & Fienberg, 1999).

Until 1960, the racial classification of individuals in the census relied upon the reports and observations of the census enumerator (Anderson, & Fienberg, 1999). For the next several decades, race classification reflected self–identification into one of a fixed set of categories. In the 2000 census for the first time individuals are instructed to identify themselves using as many racial categories as they choose.

The census continues to be inextricably bound to issues of race and representation. The racially ambiguous status of Hispanics is becoming an increasingly important part of the racial self-portrait that is the census. Of course, social and political contestations of people from "mixed" racial heritage is also transforming and blurring the boundaries of race in U.S. society. We discuss each of these issues in more detail in the next section.

E. Contemporary Racial Formation: The Impact of Multirace and Hispanic

In the United States, racial categories reflect our own particular political and economic struggles. There are several other racialized contexts, with very different historical trajectories with regards to race, most notably in Latin America, Brazil, and South Africa (Rodriguez, 2000; Degler, 1986; Marx, 1998). In many of these contexts, race is defined in terms of appearance and class, rather than ancestry. While racial stratification with whites at the top and blacks at the bottom of the status hierarchy characterizes each of these other contexts, the boundaries separating races are not as rigidly drawn. For example, it is not uncommon in many parts of Latin America to find within the same family people who are "Moreno" (dark-skinned) and others who are "Jabao" (high-yellow) (Rodriguez, 2000; Degler, 1986). The categories are not meaningless; they are attached to differential treatment and life circumstances (Rodriguez, 2000). Categories also reflect the dominance and value of white "racial" characteristics over those of blacks and Indians. However, it is appearance rather then ancestry which determines an individual's experience of race and racism (Rodriguez, 2000; Degler, 1986). Most research in this area has found that Hispanics understand "race" to mean some combination of nationality, national origin, ethnicity, culture, and skin color (Rodriguez & Codero-Guzman, 1992). Further, Hispanics tend to see race along a continuum, rather than in dichotomous terms of "white" or "black."

 Increasingly, Latin American conceptualizations of race are having an impact on the ongoing racial formation process in the United States context. Only in one federal census (1930) have Hispanic Americans been classified as a racial group.[1] This classification

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[1] In the 1930 census the Census Bureau listed "Mexican" as a possible answer to the "color or race" question (Anderson & Feinberg, 1999).

was resisted by Hispanic Americans, and has never been repeated. However, since 1970 Hispanic-origin persons have had two opportunities to identify themselves, once in the ancestry question which is included in the long form, and also on the Hispanic origin question included in the short form. In this manner, although Hispanic origin is officially represented as an ethnicity, the political treatment suggests some ambiguity as to whether and how Hispanic ethnicity is connected to overarching racial understandings. As such, census treatment of Hispanic groups in the United States exemplifies the social constructedness of race (Rodriguez, 2000).

Another important social challenge in ongoing struggle over the social meaning of race has been issued from "mixed-race" or "multiracial" individuals. Like Hispanics, this group has grown increasingly large and has been able to successfully argue that they do not fit into the traditionally rigid set of racial categories employed in the U.S. Census. In recent years, parents of mixed-race children and multiracial individuals, continuing in the spirit of self-identification, have argued that selecting one race forced individuals to deny the racial heritage of one parent. As a consequence, the major change introduced in the 2000 census was with regard to racial identification. For the first time, individuals were instructed to classify themselves with all the racial categories with which they identified. As suggested by this description, persons responding with multiple racial categories should not be seen as revealing either their parentage, or their full ancestry. Rather, respondent's choices merely indicate the groups with which they *feel* social identity. Morning (2000) has suggested that there is a range of people who might be considered multiracial (please see Section 3 of this guide for a more complete discussion of this issue).

The historical progenitors of contemporary treatment by the census of "mixed-race" individuals can be found in decisions and rules governing the enumeration of "mulattos, quadroons, and octoroons" among people with some African American ancestry, as well as the somewhat reverse "blood quantum" enumerations of American Indians in the early part of the last century. Mulattoes were counted for the first time in 1850 (Williamson, 1984). Concern with the fluidity of the first category was expressed in the instructions for enumerators in 1870 advising them to be "particularly careful in reporting the class Mulatto. The word is generic and includes quadroons, octoroons, and all persons having any discernable trace of African blood (U.S. Bureau of Census, 1989). By contrast, in 1860 "half-breeds" were listed separately from Whites and Indians. In 1870 this issue was debated as census officials questioned: "shall they be classified with respect to the superior or to the inferior blood?" (Rodriguez, 2000). It was decided that the criteria applied to the "former slave population" should not be applied to Indians. Ultimately, in what was perhaps the first official recognition of the situational and social nature of racial identity, the census chose to classify "half-breeds" as white if they lived among whites, and Indian if they lived among Indians.

F. The Continuing Importance of Race: Utility of U.S. Census Data on Race

The problem of race and racism has followed us into the twenty-first century. Race continues to be a central axis of social relations. Both in terms of lived experience and

group-based indicators of inequality, the U.S. stands out as a profoundly racially stratified society. In the aftermath of the Civil Rights Act of 1964, the Voting Rights Act of 1965, and the Housing Act of 1968, racial classifications in the federal statistical system have been called upon to meet the needs of civil rights enforcement. The efforts to ensure that the legacy of Jim Crow and other discriminatory legal and social practices are laid to rest requires an understanding that to assert race as a social construction is not to argue against the centrality of race and racism in American social life.

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3
Multiracial Persons in 2000

The major change introduced in census 2000 was with regard to racial identification. For the first time, individuals were asked to check all the racial categories with which they wished to self identify (the exact change of wording in the questionnaires is given in the appendix). How to best address the data collected requires careful consideration.

A. The Concept and the Need

The concept of multiracial, or mixed-race, like the concept of race itself involves both self identification and societal definition. Persons selecting multiple races should not be seen as revealing their full racial ancestry, but rather as disclosing the groups with which they feel some social identity. The number of multiracial individuals in the United States may range from 2.4% to as many as 40% or more. Morning (2000) has suggested the very idea that a discrete, identifiable population of multiple raced persons even exists is questionable; the answer depends on what social groups are considered races, and what characteristics of ancestry are thought to comprise multiracial identity. For instance, individuals' multiracial ancestry can result from them having parents of two different races, or from interracial unions occurring in their more distant ancestry. The census does not provide a way to distinguish between these two groups. Hence, the resulting first official portrait of the multiracial population will be murky at best. For example, depending on successively more inclusive definitions, the range of potential multiracial respondents in the United States are as follows:

Self identified multiracial in census	2.4%
Including all Hispanics	11.9%
Including a portion of blacks	20.9%
Including a portion of whites	39.3%

Persons most likely to self identify with multiple races, and those pressing most strongly for revision of the census questionnaire, are those with parents of two different races. Previous census practices posed a dreadful choice requiring children to identify with the race of one parent or the other. Conversely, others who have distant ancestors of different races may or may not think of themselves as belonging to those different races.

In addition, immediately prior to census 2000, a political campaign was mounted in many communities to guard against loss of political weight by urging people to check a single race. For example, in Los Angeles there was a concerted political effort to persuade people with known black ancestry to simply, "check the black box." As a result of either this political campaign or of weak self-identification with distant ancestors, the resulting self-identification among African Americans in the U.S. as a whole revealed only 4.8% acknowledged multiple racial ancestry in census 2000 (Census Bureau, 2001, CENBR/01-1, Table 5). (Note: the population of African Americans used for this calculation consists of all those who selected either black alone or in combination with some other race.)

The example of American Indians and Alaska Natives reveals an opposite pattern. Among this group, 1.6 million or 39.9% acknowledged multiple racial ancestry in census 2000 (Census Bureau, 2001, CENBR/01-1, Table 6). In fact, demographers have long noted a trend of increasing self-identification with American Indian ancestry. The American Indian population doubled between 1970 and 1990, with 62% of growth in the 1970s and 35% of growth in the 1980s added by increased self-identification (Passel, 1996). This increase in self-identification was expressed by willingness to check American Indian as the sole choice on those older census questionnaires. Now, with the multiple race option, even more Americans are willing to claim American Indian heritage. This is more than a simple proportional expansion of this population group. The newly self-discovered American Indians are drawn from higher education levels and live in metropolitan areas (Eschbach, Supple, and Snipp, 1998).

In a preliminary review of results from census 2000, Passel (personal correspondence) has expressed belief that the number choosing American Indian alone tracks closely with the number that would have been expected from normal demographic growth of the population counted in 1990. Thus, the 1.6 million who selected American Indian in combination with another race represent 66% more than would otherwise have been expected.

The twin trends of rising levels of intermarriage and growing willingness to self-identify with multiple races will surely increase the multiple race prevalence in future years. The first challenge, however, is how to make sense of the new data from census 2000.

B. Full Categorization Available in 2000

Data on multiracial persons are being reported from census 2000 in very detailed categories. As described more fully in Section 5, a variety of presentation formats are

provided by the Census Bureau for summarizing these data. All of these are reduced in some way from the total of 126 categories contained in basic census files: 63 possible combinations of races alone or in some combination, repeated for the total population and non-Hispanic population (hence, by subtraction for the Hispanic and non-Hispanic populations).

As an alternative to just letting people choose a single "multirace" category, the Census Bureau elected to have people check all races that apply. This creates great flexibility in describing the nature of the multiple race identification. Given six racial categories, this creates a great many possible combinations, each reported as its own category in the racial tabulations.

These 63 categories are too numerous to repeat here but are reported for the U.S. population in the Census Bureau's "Overview of Race and Hispanic Origin" (Census Bureau, 2001, CENBR/01-1, Tables 1 and 2). An example is the three-way combination of "White; Black or African American; American Indian and Alaska Native," which contains 112,207 U.S. residents. The most detailed category includes all six races: "White; Black or African American; American Indian and Alaska Native; Asian; Native Hawaiian and Other Pacific Islander; Some other race," which contains 823 U.S. residents.

All this detail, repeated also for Hispanics and non-Hispanics, amount to a *blizzard* of small categories. There is a danger of information overload. While the ability of the census has been enhanced to incorporate the fluidity and complexity of individuals' racial self identity, the potential has also increased of losing understanding of the data in the midst of so many categories.

C. Reduced Categorization to Reflect Major Groupings

One technique for reducing the complexity of 63 x 2 racial and Hispanic categories is to reduce the number of categories to reflect only numerically major single race and multirace groupings. In the U.S. as a whole, only 2.4% of the population identified themselves as being in more than one racial category in census 2000. Fully 93% of those multiracial persons identified with only two races and could be termed biracial.

Using the example of the state of Texas, Exhibit 2 displays the 2000 racial distribution of the population. Those who identified with a single race (monoracials) are shown at the top of the table. By far the largest category is white (71.0%), followed by black (11.5%) and "other" (11.7%). As will be described in the next section, the latter category consists largely of Hispanics, many of whom are also included in the white category.

In Texas, 2.5% of residents are multiracial, close to the national average. The vast majority are biracial, with only a small additional number who belong to three or more races. It is of considerable interest which multiracial categories are most prevalent. The Office of Management and Budget (2000) has issued guidelines calling attention to four multiracial combinations. These are shown in the first four biracial combinations in

Exhibit 2. The largest of the four is "white and American Indian or Alaska Native" (AIAN), with 67,407 residents, amounting to 0.3% of the Texas population.

Unforeseen in the recommended OMB biracial categories is that the largest combination is "white and other," with 267,739 residents, amounting to 1.3% of the Texas population. In other words, over half the multiracial residents of Texas belong to this one seemingly anonymous category of white and other race. As addressed in Section 5, this category contains Latinos not otherwise identified in the racial categorization scheme of the census.

D. Detailed Multiracial Prevalence

The multiracial percentage of the population varies substantially within the U.S. The lowest prevalence is found in portions of the south, led by Mississippi with 0.7% multiracial residents. The highest prevalence, by far, is found in Hawaii, with 21.6% multiracial residents. So prevalent is multiracial identity in Hawaii, that it reaches well beyond the biracial pattern common in most of the country: fully 16.7% of the residents recognize three or more races in their racial self identity.

The propensity to self-identify with multiple races varies sharply between racial groups. Based on all those who identified with a given race, either individually or in combination with other races, we can calculate what proportion identify with only that single race alone and what proportion identify with other races in combination with that race. Exhibit 3 provides a detailed breakdown for the state of Texas.

Among those claiming white racial identity, 97.1% are white alone and 2.9% are multiracial. Among blacks, 96.5% are monoracial and 3.5% are multiracial. Members of other racial groups have much greater likelihood of being racially intermixed, such as the American Indians who are only 54.9% monoracial. The lower portion of Exhibit 3 provides greater detail, showing specific biracial combinations within each race. All races are most likely to be mixed with whites.

Differences between the states are quite striking. When Exhibit 3 is executed for different locations, we discover interesting patterns (data not shown). In the U.S. as a whole, 97.5% of whites and 95.2% of blacks are monoracial, with the remainder of mixed race. Black and white residents are much less likely to claim mixed racial identities in Mississippi: 99.1% of whites and 99.2% of blacks are monoracial, signifying a very hard racial boundary in that state. In a state like Oklahoma, on the other hand, 94.9% of whites and only 91.6% of blacks are monoracial. Of the blacks, 3.6% are intermixed with whites and 2.7% with American Indians (data not shown). In states with very small black populations, the monoracial share of blacks often falls sharply. In Vermont, with 4,492 black residents, only 68.2% are monoracial and 31.8% are multiracial, the vast majority of whom are mixed with whites.

Similar differences are found among American Indians and Alaska Natives. In the nation as a whole, 60.1% of this group is monoracial and 39.9% claims mixed race heritage. In Oklahoma, 69.7% are monoracial and in South Dakota, with its large Indian reservations,

91.2% are monoracial. As in the case of blacks in Mississippi, the high monoracial percentage in South Dakota signifies a sharp separation of races. (It also may reflect the effect of an organized political movement in that state to check only the American Indian box.) In Vermont again, with its very small Indian population (6,396), the monoracial percentage is extremely low, 37.8%, but an even lower monoracial proportion is reported in Pennsylvania (34.8%) which has 52,650 residents of American Indian heritage. As discussed above, self-identification with American Indian heritage varies substantially by degree of urbanization and education, as well as by population size of the group.

References to Section 3

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4
Issues of Overlap

The preceding discussion of multiracial persons has glossed over critical issues regarding overlapping identifications. Census respondents can place themselves in multiple categories at the same time. Potentially they can choose all six racial categories and select an Hispanic identification as well. This creates at least two practical problems.

First, for some analyses it is desirable to count each individual in only one category at a time, such as when we wish to add up all categories to form 100% of the population. If individuals are "double counted," such as once in the black population and again in the white population, this creates a difficulty in that summation.

Second, we could uniquely identify people as members of each specific category that is a combination of different races—the 63 categories—but that suffers from the problem of a *blizzard* of small categories that only confuses our comprehension of the whole. Some reduction is required to a more manageable, smaller set of categories.

These problems are compounded when we incorporate Hispanic origin as another overlapping dimension. Yet, as shown in the next section, we cannot avoid this integration of race and Hispanic origin when the respondents themselves inject it into their racial responses. The large "other" category is composed mostly of Hispanics or Latinos, and the white catetgory includes approximately the other half of Latinos. Thus, for clarity, Hispanic origin must be treated along with race.

Some criteria are required for resolving the overlap when it is necessary to sort the group members into exclusive categories. We posit here a set of criteria that could be explicitly stated as a means of determining the disposition of the overlap between racial categories and Hispanic origin. Each of the criteria has merit but some may conflict with one another:

> ❑ Following civil rights enforcement guidelines, overlaps with the white racial category should be resolved in favor of the group that is not white (OMB, March 9, 2000);

- ❏ Overlapped cases in the "some other race" category should be assigned into the Hispanic category because of the frequent respondent confusion that Hispanic identity constitutes a race (but is coded as "some other race");

- ❏ One minority group should not arbitrarily displace another with which it is overlapped:

  - Overlapped cases should be split equally between the shared racial and Hispanic identities; or

  - Overlapped cases should be assigned into the minority group where the overlap constitutes a larger share of that group; or

  - Minority groups with longstanding disadvantages should not be displaced by newer minorities;

- ❏ Simplicity of procedure is desirable, both for the understanding of users and for the convenience of programmers; and

- ❏ Consistent assignment procedures are desirable and should vary as little as possible, particularly across neighborhoods or cities within the same county or state.

The above criteria apply equally to overlaps between racial groups and between race and Hispanic origin. In the next section we apply these to the matter of Hispanic overlap, followed by a later section where we explore the more complex question of joint multiracial and Hispanic overlap.

Close attention to the matter of Hispanic overlap is warranted for two particular reasons. First, the Hispanic or Latino population is quite large and its overlap has much greater numerical consequence than is true of small racial groups. In addition, we have acquired much greater experience with managing the Hispanic overlap and lessons from that experience may prove useful for managing the new overlap created by persons selecting more than one racial identity.

5
Hispanic Overlap with Race

The overlap of two or more racial identities among multiracial individuals poses a substantial new challenge for presentation of the 2000 census data. This new overlap joins a second, much larger form of overlap that also existed previously in the 1980 and 1990 censuses. Respondents in the census are asked to report both their racial identity and their Hispanic or Latino origin (see the questions reprinted in the appendix). This creates an overlap of the two identities, the intersection of which yields such categories as non-Hispanic whites. In the presentation of 2000 census data, it will now become difficult to address individuals or two or more races without also addressing joint categories of race and Hispanic origin.

This section summarizes a variety of issues related to this challenge. We first describe the relative neglect in the past with regard to the overlap between the Hispanic origin question and racial identity. Next we identify the specific racial categories that most often overlap with Hispanic origin and we review the ad hoc and systematic procedures that have been employed to address this overlap. Finally, we summarize some ethical and practical questions regarding the tabulation dominance of one group over another when attempting to resolve the overlap.

Close attention to the matter of Hispanic overlap is warranted for two particular reasons. First, the Hispanic or Latino population is quite large and its overlap has much greater numerical consequence than is true of small racial groups. In addition, we have acquired much greater experience with managing the Hispanic overlap and lessons from that experience may prove useful for managing the new overlap created by persons selecting more than one racial identity.

A. Past Inattention to the Overlap of Hispanic and Racial Identity

To date, very little attention has been given to the intersection of race and Hispanic origins. In part, this inattention is inherited from the past when Hispanics or Latinos were only a small fraction of the population. In 1980, only 6.4% of the nation's population was of Hispanic origin, this number has increased to 12.5% in the 2000 census and is

anticipated to grow markedly in future years. In California, the prominence of Latinos is already much greater, rising to 32.4% in the 2000 census.

Because of the importance of the Latino group in California, it has long been treated as a category equivalent to race. Persons are assumed to be either Latino or to have some other racial identification (white, black, etc.).

The federal Office of Management and Budget steadfastly maintains that race and Hispanic origin are distinct, and OMB has directed the Census Bureau to arrange data accordingly. Their data presentations follow one of two general formats. In the first format, tables and graphs depict a series of racial categories followed by a Hispanic designation that carries the following stated caveat: "Persons of Hispanic origin can be of any race." As a result, summing the number of people in the racial categories and the Hispanic number results in a total that is larger than 100%. In fact, the Hispanic individuals are counted twice – once in the racial categories and again in the Hispanic total.

The second common format used by the Bureau for data presentation seeks to resolve the double counting problem in a very simple way. The series of racial categories is presented only for non-Hispanic individuals, and that is followed by a total for all Hispanics. All of these categories together sum to the total population. Whereas in the past this rather blunt procedure was generally accepted, it may not withstand the heightened scrutiny generated by debate over the more refined methods being proposed for how to resolve the overlap of multiple racial identities.

As an illustration of this overlap between race and Hispanic origin, 2000 census data for the state of Texas recorded 49,503 individuals who self-identified as American Indian alone on the race question and also were of Hispanic origin. These persons constitute 41.8% of all monoracial American Indians *but only 0.7% of all Hispanics or Latinos*. Obviously, the overlap of Latino and American Indian is a far greater share of the Indian total (118,362) than of the far larger Latino total (6,669,666).

Under the first common practice of the Census Bureau, these individuals would be tabulated separately in both the American Indian and Latino totals. Under the second common practice of the Bureau, all of the Latinos would be removed from the American Indian category and summed into the Latino total. (An opposite alternative would have been to remove the American Indians from the Latino category and sum them into the American Indian total.)

Census 2000 findings will be released in far greater detail than ever before for Hispanics and non-Hispanics. The much greater detail being given the race variable in census 2000 is matched by added detail for Hispanics or Latinos, because each detailed racial category has an equivalent tabulation breaking it into Hispanic and non-Hispanic components. In addition, the Bureau will be releasing race and Hispanic data in numerous different tabulation schemes, adding further to the variety of detailed results. These alternatives are addressed in Section 6.

Ironically, all of this rich variety may be simply underscoring neglect of the intersection between Hispanic origin and race. The plethora of alternative formattings reveals indecision about how best to categorize race and Hispanic origin together. It also reflects the consequence of the Bureau's decision not to integrate a Hispanic or Latino category within the racial identity question, as it had been tested prior to the 2000 census (Hirschman et al. 2000). Ultimately, it leaves the census user, not the census expert, as the decision maker about how to handle the intersection of race and Hispanic origin, and without guidance from the Census Bureau or a clear convention of how to proceed, users will go their different ways. The lack of clarity and consistency that could result continues a tradition of neglect.

B. Which Categories of Race Have the Greatest Overlap with Hispanic Origin?

A first step in developing a more organized approach to the integration of racial and Hispanic origin data is to examine the percentage of each racial category that is Hispanic. Census 2000 data collected in Texas can be usefully analyzed in this regard, given that Hispanics or Latinos amount to 32.0% of the state population, more than the national average, but similar to California. Somewhat different results would be obtained in different locations with lower Hispanic concentrations, but the general pattern most likely is not misleading.

Certain racial categories have higher likelihood than others of containing Hispanics or Latinos. There are two different ways to approach this assessment. First, as a percentage of all Latinos, 58.0% identify with the white racial category alone among races and 36.3% identify with the category "some other race." Responses are coded into this category when individuals identify themselves by such terms as Mexican or Latino. Obviously, a high proportion of Latinos view themselves in such terms. The white racial category is selected most often by older Latinos who were raised to identify themselves as "white" in the 1970 census and in earlier years.

An alternative view of the data asks what percentage of each racial group also identifies as Hispanic or Latino (Exhibit 4). The racial category for persons of "some other race" is over 95% Latino, indicating that very few persons other than Latinos select this category (Rodriguez 2000). Conversely, about 26% of whites are also identified as Latino. The other categories where Latinos make up a large share of the total involve multi-racial groupings. Over one-half of all multiracials are also Latino; however, among the four specific racial groupings recommended by the Office of Management and Budget, no more than 14% in the highest category (white and American Indian or Alaska Native) are Latino. Instead, the highest Latino prevalence is found in multiracial combinations that contain "some other race," including 84% of the white-and-other combination. Again, this reflects the difficulty that Latinos often have in identifying themselves within the official racial categories that exclude Latino as a race (Rodriguez 2000).

Additional substantial overlap is found between Hispanic origin and the American Indian and Alaska Native (AIAN) category. Fully 42% of those who identified with AIAN as a single race also identified as Latino, followed by 14% of those who identified as a combination of white and AIAN. These Latino proportions of American Indians in Texas

are not reflective of the whole of the U.S., but may be most characteristic of the southwestern states including California.

Other regional differences in the U.S. pertain to African Americans or blacks. In the Texas data, barely 3% also identified as of Hispanic origin, but in New York state, where there are large concentrations of Dominicans and Puerto Ricans, this proportion reaches 7% and is likely far greater in selected neighborhoods of New York City.

C. Tabulation Dominance and Its Consequences

The answers to the separate questions about racial and Hispanic origin can be formatted in two general ways, either as separate tabulations or as a crosstabulation that integrates the answers to the two questions. In common practice, crosstabulation and integration is the norm (as illustrated by ubiquitous convention of the non-Hispanic white category). What remains neglected is careful consideration of how best to execute that integration.

Integration of data collected from two separate answers requires decisions on priorities about which variable to make dominant over another. The widespread practice with 1990 census data was to make the Hispanic variable dominant over race (Myers, 1992). "Dominance" means that the responses that overlap Hispanic origin and a given racial category are assigned to the dominant variable and not the other.

A rationale for the intended dominance needs to be articulated. This dominance could be expressed uniformly, such as removing Hispanics or Latinos from *all* categories of the race variable, maximizing the total of Hispanics or Latinos while shrinking the totals in all the racial categories, or it might be more selective. Adjustments should be considered on a category by category basis.

1. Hispanic Dominance Over White and "Other" Categories

One category of race where Hispanic origin is widely accepted as dominant is white. The concept of non-Hispanic white population is well understood. The residual Hispanic whites are then lumped in with all Hispanics.

A second category of race where Hispanic origin clearly should be dominant is that of "some other race." This category is comprised largely of Latinos who did not know how to categorize their race; hence, it makes sense to subtract all these Latinos from this miscellaneous racial category and place them in a category that is more meaningful, i.e., that of Latino.

In sum, it makes perfect sense to treat whites and those of "some other race" as non-Hispanic, removing their Hispanic-origin members to be summed into the broad Latino category.

2. Hispanic Dominance Over Minority Categories

The dominance of Hispanic origin relative to racial minorities, however, is much more problematic. Under what criteria would we want to make one minority group dominant in

tabulations over another? Under the neglect of Hispanic origin and race, no criteria have been expressly stated by the federal government or others. In practice, it appears that two latent criteria may be operative. One criterion is to treat all groups the same way that the white population group is treated with respect to Hispanic origin. If that group is reduced in number to a non-Hispanic definition, then it is consistent to do the same to the other racial groups. A second and related latent criterion may be one of data programming simplicity. It is simply easiest to apply the Hispanic origin variable as a binary filter that extracts all Latinos from their racial categories and sums them to form a single large Latino category.

American Indians are one group that is sharply affected by their overlap with Hispanic origin. It is difficult to argue that Latinos should have precedence over native Americans as a minority group in America. Moreover, the Latino category is far larger than the American Indian group. As shown above, the overlap of American Indian and Hispanic categories is a far larger share of the American Indian total (41.8%) than of the far larger Hispanic total (0.7%). Thus, the assignment of the overlap to one group or the other has proportionally very different consequences.

African Americans or blacks are another minority group that has longstanding residence in the U.S. and which has a clear heritage of disadvantaged status. It is difficult to argue that the Hispanic category should take precedence over this group as well. However, the black population has a size more equal to Latinos than is the case for American Indians, and so the proportionality of impact from allocating the overlap is more equal.

Asians overlap with Hispanic origin largely through the Filipino population, many of whom have Spanish surnames dating from the period of Spanish occupation of the Philippine Islands. Whether these individuals are better described as Asian or as Latinos could be debated; however, it would seem than Filipinos differ substantially from our usual concept of Latino.

The remaining category of Native Hawaiian and Other Pacific Islander (NHOPI) bears 25% overlap with Hispanic origin. However, the nature of this overlap in this group is not well understood at this time.

References to Section 5

Hirschman, Charles, Richard Alba, and Reynolds Farley. 2000. "The Meaning and Measurement of Race in the U.S. Census: Glimpses into the Future." Demography, 37: 381-93.

Myers, Dowell. 1992. Analysis with Local Census Data. New York: Academic Press.

Rodriguez, Clara E. 2000. Changing Race: Latinos, the Census, and the History of Ethnicity in the United States. New York: New York University Press.

6
Summary of Alternative Formats in Which Census 2000 Data are Issued

The Census Bureau released racial and Hispanic origin data from census 2000 in an uncommon variety of formats. The sheer variety of data is sure to create confusion unless users are made conscious of the menu from which they are selecting. Some of these data formats are much briefer and more concise than others, and some are released earlier than others. For many users, the format of data that they first encounter likely will come to be their understanding of race and Hispanic origin in America.

A. Brief Formats Issued Early

For many users, "Quick Tables" will be the major way of learning about the race and Hispanic origin make-up of the population. These tables are issued both from the Census 2000 Redistricting Data (Public Law 94-171) issued in March 2001 (Table QT-PL) and from Summary File 1 issued in summer 2001 (Tables QT-P3 to P6).

1. The First Look: QT-PL

The simplest data issued in the first data release, the Census 2000 Redistricting Data (Public Law 94-171), is in table QT-PL. The following categories are provided:

> RACE
> Total Population
> One Race
> > White alone
> > Black or African American alone
> > American Indian and Alaska Native alone
> > Asian alone
> > Native Hawaiian and Other Pacific Islander alone
> > Some other race alone
> Two or more races

HISPANIC OR LATINO AND RACE
Total Population
Hispanic or Latino (of any race)
Not Hispanic or Latino
    One Race
        White alone
        Black or African American alone
        American Indian and Alaska Native alone
        Asian alone
        Native Hawaiian and Other Pacific Islander alone
        Some other race alone
    Two or more races

Observe that the overlap of race and Hispanic origin is resolved through uniform Hispanic dominance over all race categories. First Hispanics or Latinos are totaled and then race is tabulated for all those who remain, i.e., only for non-Hispanics. Also observe that the multiracial individuals are aggregated in one category, "Two or more races."

More detailed data are contained in the same data release (Matrices PL1, PL2, PL3, and PL4), but the complexity of those detailed tables may discourage users. We discuss those alternatives below.

2. Quick Tables in Summer 2001

Subsequently, additional Quick Tables were issued from Summary File 1 during summer 2001. These make quite a bit more detail easily available to users.

Table QT-P3 provides more details about race, breaking the broad Asian category, for example, into the more detailed categories of Asian Indian, Chinese, etc. Similarly, the broad Hispanic or Latino category is broken into its components of Mexican, Puerto Rican, Cuban, and a residual "other Hispanic of Latino." Similar information is also available in the "Demographic Profiles" series released in summer 2001 (table DP-1).

Table QT-P4 provides details on the multiracial population composed of individuals selecting two or more races. For persons identifying with two races, all possible combinations are identified. But for persons selecting three or more races, only a single residual total is provided.

Two additional Quick Tables, QT-P5 and P6, deserve special attention for the concepts they introduce.

3. Minimum and Maximum Racial Counts

The presence of multiracial individuals poses a challenge for tabulation purposes. Previous tables discussed have separated out the number of people selecting a single race. A question remains as to whether or not multiracial persons should be added to the race groups with which they identify.

The solution the Census Bureau has adopted is to present two numbers, one for individuals selecting the race alone, and another that sums those single race individuals together with all others who selected that race in combination with some other race. For example, in QT-P5, the following data are reported for blacks or African Americans in the United States:

BLACK OR AFRICAN AMERICAN

Total population (all races)	281,421,906	*(1)*
Black or African American alone or in combination	36,419,434	*(2)*
Black or African American alone	34,658,190	*(3)*
Black or African American in combination	1,761,244	*(4)*
Not Black or African American alone or in combination	245,002,472	*(5)*

The above tabulation is repeated for each of the six major race categories, including "some other race."

The count of those who selected a black or African American racial identity alone (34,658,190) is a *minimum* count, or a lower bound, to the number of African Americans in the population. Inclusion in the count of those who also selected African American in combination with another race (1,761,244) raises the total to 36,419,434 persons, a *maximum* count and an upper bound to the number of blacks or African Americans counted in the population. Which of these counts is the "real" number of blacks or African Americans? Users will have their choice.

One major drawback to this scheme is that persons selecting multiple races are "double counted," as they will appear under each race where they have indicated some identity. When all the figures are totaled for the "alone and combination" categories under each of six races, they will sum to more than the total population. Because some multiracial individuals have selected more than two races and therefore can be triple or quadruple counted, the overcounting exceeds the simple number of multiracial persons.

4. Integrating Hispanic Origin Into the Multiracial Quick Tables

Table QT-P6 contains much the same information as QT-P5, but it interleaves new lines recording Hispanic or Latino origin.

BLACK OR AFRICAN AMERICAN

Total population (all races)	281,421,906	*(1)*
Black or African American alone or in combination	36,419,434	*(2)*
Hispanic or Latino	1,035,683	*(3)*
Black or African American alone	34,658,190	*(4)*
Hispanic or Latino	710,353	*(5)*

As before, the above tabulation is repeated for each of the six major race categories, including "some other race."

In this table format, Hispanic or Latino is shown as a subset of the race category. The totals in lines 2 and 4 preserve the whole count of African Americans, and line 2 is an

upper bound count. The user has the option of removing Latinos from these totals, yielding non-Hispanic African Americans. Latinos can be removed from as many races as desired and then summed to create a total of Latinos. However, if some races are kept whole with Latinos included, then the extracted total of all other Latinos will not sum to the total of all Latinos recorded in the census.

This trade-off is inescapable: because of the overlap, either the sum of extracted Latinos will be less than the total recorded in the census, or the number in a racial category that is left after extracting the Latinos will not equal the total of that race as recorded by the census. As discussed in the preceding section, the decision should not be made arbitrarily or casually but in accord with consciously stated criteria.

B. Brief Formats Used for Repeating Characteristics

A set of brief racial and Hispanic categories are also employed at later stages of census data release. Data tables from Summary File 1 and Summary File 3 (which will be released in summer 2002) report characteristics of the population (age, household, education, income, etc.) for a series of specific racial and Hispanic groups. Whole tables are repeated for the following nine categories:

> White alone
> Black or African American alone
> American Indian and Alaska Native alone
> Asian alone
> Native Hawaiian and Other Pacific Islander alone
> Some other race alone
> Two or more races
>
> Hispanic or Latino
> White alone, not Hispanic or Latino

This set of racial and Hispanic categories is very compressed because of the volume of data that needs to be repeated for each separate category. Observe that all multiracials are combined in a single total, that only single race categories are specified, and that Hispanic is not integrated with race with one exception, namely the category of non-Hispanic white alone.

This set of nine categories does not provide an accurate and complete account of the *number* of people of different racial and Hispanic origins. However, these nine categories should serve fairly well for summarizing *characteristics* among the larger groups in the population.

C. Detailed Formats of Racial and Hispanic Origin

The most detailed information on race and Hispanic origin consists of all possible combinations of the six major racial categories (a total of 63 combinations), repeated specifically for non-Hispanics. Subtraction yields Hispanics, and so we effectively have

63 categories times 2 (Hispanic and non-Hispanic), totaling 126 categories. In March 2001, as part of the Census 2000 Redistricting Data (Public Law 94-171), the Census Bureau issued these data as Table PL2 along with the simpler, Quick Table QT-PL described above.

So many categories are involved that many users will simply rely on the Quick Table. The advantage of the more detailed PL2 table is that these data enable very flexible construction of different categorization schemes, as shown in the next section. To take advantage of this resource, users will need to organize the PL2 data with assistance of a computer, either using spreadsheet or other software.

Summary File 1 tables P3 and P4 contain the same information as the redistricting data table PL2. Those data are more widely available than the redistricting data and supercede the earlier file.

Finally, the most detailed set of categories for reporting characteristics of racial groups are those released in the Summary File 2 data series. These data present the number of individuals identifying with one race alone, and with two, three, four, five, and six races. This method of presentation produces increasing numbers of possible categories. For example, table PCT001 presenting one race alone produces six possible categories, two races produces 16 additional categories, three races produces 20 additional categories, four races produces 15 additional categories, five races produces six additional categories, and all six races produces one more category. Together this table portrays the 63 possible categories of racial identification available from census 2000.

These data also divide the Asian, Native Hawaiian and Other Pacific Islander, and American Indian and Native Alaskan racial groups into more specific categorizations. There are 18 Asian categories (such as Chinese, Vietnamese, and Pakistani), nine Native Hawaiian and Other Pacific Islander categories (such as Samoan and Fijian), and 78 American Indian and Native Alaskan tribes (such as Chippewa, Sioux, and Aleut) listed. Additionally, the Hispanic or Latino ethnic group is divided into 39 detailed categories (such as Puerto Rican, Salvadoran, and Peruvian).

7
Measuring Change from 1990 to 2000

The radical restructuring of the census 2000 questionnaire leads to tabulations of race and Hispanic origin that are very different from those issued in 1990 and before. Much of the interest in census data focuses on description of how local areas have changed in the previous decade. For this purpose it is necessary to convert the 2000 data into a format that is most comparable to that issued from the 1990 census. This problem is known as the search for "bridging solutions."

In this section we compare a dozen different solutions. One set emphasizes Hispanic dominance, maximizing the total of Hispanic or Latino individuals, and reporting race only for the non-Hispanic portion of the population. The second set employs a scheme of partial Hispanic dominance. The example tables are constructed from the Sacramento census dress rehearsal data collected in 1998 and released in October 2000 on the "Census 2000 Demonstration Disc—Public Law 94-171 Redistricting Data."

A. Bridging Solutions with Hispanic Fully Dominant

Exhibit 5a contains six different tables that illustrate comparability between 1990 and 2000 for Sacramento city, maximizing the Hispanic population by making Hispanic origin dominant over all racial categories.

1. Hispanic or Latino Only

Table 1 illustrates the simplest and cleanest bridging solution, one that uses only the data on Hispanic or Latino origin. The question on Hispanic or Latino origin has remained essentially unchanged between the 1990 and 2000 censuses. One alternation of some consequence is the placement of the question in the questionnaire. In 1990 the Hispanic question was placed after the race question. In 2000, the question precedes the race question. According to U.S. Census Bureau's report on the results of 1996 Race and Ethnic Targeted Test, the effect of the placement change is that it reduces the nonresponse rate to the Hispanic origin question from 10 to 7 percent. The total percent Hispanic in the population was reduced about 2 percentage points, from 77.5 to 74.6 percent (Census Bureau 1997, Hischman, et. al. 2000).

Data in Table 1 show that the fraction of the Sacramento population that is Hispanic has grown while the non-Hispanic fraction has declined. Left unanswered by this alternative is the trend in different racial groups.

2. Minimum and Maximum Racial Alternatives

Table 2 preserves the whole count of Hispanics shown in Table 1 and breaks out race data only for those who are non-Hispanic. (Non-Hispanic data for the native Hawaiian and Pacific Islander category in 1990 was merged with the Asian category.) All multiple race individuals are counted in one summary total. Thus, the data for races are a *double minimum*. Not only do the race categories in 2000 contain counts of only those who chose a single race alone, but they also remove anyone who also checked that they were Hispanic or Latino.

In contrast, Table 3 allocates the multiracial total to all constituent racial groups checked by individuals, effectively "double counting" multiracial individuals in multiple categories. This resembles the maximum count alternative reflected in categories for races "alone or in combination," as described above. However, the subtraction of Hispanics from these racial categories reduces the whole count in each racial category, as described above for Table QT-P6. A particular problem with the double counting solution is that the total of the table *exceeds* the total population.

3. Fractional Apportionment Methods

Fractional apportionment methods distribute individuals fractionally into the racial categories the individuals' chose. One fractional method apportions multiracial individuals in fractions equal to 1/N, where N equals the number of racial categories checked by the individual. Thus a person who is white-black-American Indian would count 1/3 in each of those racial categories. A similar fractional approach is used to calculate full time equivalents (FTE) in employment situations. The advantage of this method, shown in Table 4, is that all constituent racial categories count equally, as in Table 3, but the table sums to the correct total population.

A drawback to the preceding alternative is that it counts individuals equally as both white and minority. For civil rights enforcement such individuals will be assigned only to the racial categories that are not white (OMB, March 2000). Accordingly we introduce here a variant on the fractional method that employs a reduction of whites from multiple combinations. For example, in the case of someone identifying as white-black-American Indian, 1/2 fraction would be assigned to black, 1/2 fraction to American Indian, and none to white. This method assumes that minority status dominates white identity, consistent with civil rights enforcement, but it also reinforces a dated image of "white purity," and may be undesirable in social terms. This method is illustrated in Table 5.

Still another fractional method utilizes variable instead of fixed fractions. A number of different approaches are currently being developed by researchers. Here we feature a creative method by James Allen and Eugene Turner (2001) that uses responses to ancestry questions in the 1990 census to infer what is the multiple racial background of

each respondent. These multiple responses are then related to the one selection on the race question permitted in 1990, inferring what is the probability a person of a given racial ancestry would select a given racial identity. For example, among persons who self identified as white and black, 38.7% selected white as their one race in 1990 and 61.3% selected black. The results of applying this method (with some necessary embellishments to apportion persons of more than two races) are portrayed in Table 6.

B. Bridging Solutions with Hispanic Partially Dominant

A second set of bridging solutions is presented in Exhibit 5b. These solutions shift the prominence of Hispanic origin from full dominance over the racial categories. In consideration of criteria raised in a previous section, we propose to make Hispanics dominant over the white and "some other race" categories, but leave the other racial minorities whole. In other words, the Hispanic or Latino overlap is not removed from those categories. To do so would place a premium on Hispanic-origin status that cannot be fairly accorded relative to that of American Indians, blacks or Asians and Pacific Islanders.

The repositioning of the Hispanic origin or Latino category is signified by lowering its position in the tables from the top line to the middle of the table. All racial groups listed below Latino have had the Hispanic overlap removed and summed into the Latino total. All groups above the Latino listing are kept whole. As a side benefit, when the native Hawaiian and Pacific Islander category is kept whole, data are easily available for 1990, unlike when Hispanics are broken out. As a consequence of the change in method, the total of Latinos is reduced by about 7,000, and the equivalent number is added back into the racial groups positioned above Latinos in the table.

1. Minimum and Maximum Racial Alternatives

In Table 7 all multiple race individuals are counted in one summary total, and thus the race categories in 2000 contain counts of only those who chose a single race alone. In contrast to Table 2 in Exhibit 5a, the numbers are elevated in the top four racial minorities. For example, in place of 56,172 blacks, 58,443 are recorded in Table 7; and, in place of 9,180 American Indians and Alaska Natives, 11,270 are recorded in Table 7. The Hispanic overlap has a significant effect on the size of these racial groups defined by single race selections alone.

As before, Table 8 allocates the multiracial total to all constituent racial groups checked by individuals, effectively "double counting" multiracial individuals in multiple categories and yielding an upper bound, maximum count. The numbers of American Indians are substantially elevated by this expansive method. In fact, the sum of all categories in the table exceeds the total population by an even greater amount under this method than it did in Table 3, because more of the multiracial individuals were simply absorbed previously into the large Hispanic total.

2. Fractional and Variable Apportionment Methods

The fractional method apportioning multiracial people equally into each racial category is shown in Table 9, and the fractional method using white reduction is shown in Table 10. Both methods reduce the number of American Indians from the total recorded under double counting, but both also increase the count over that of the lower bound method using categories defined by single race alone. Similar, but less extreme, changes are seen in the case of blacks.

The Allen-Turner variable apportionment method is applied in Table 11, and we add a new alternative that adds white reduction to that method in Table 12. The numbers of blacks, American Indians and Asians are enhanced by white reduction, and whites are reduced to the same count that was observed in Table 7 where all multiracials were excluded from individual racial categories.

References to Section 7

Allen, James and Eugene Turner. 2001. "Bridging 1990 and 2000 Census Race Data: Fractional Assignment of Multiracial Populations." <u>Population Research and Policy Review</u>, 20(6): 513-533.

Hirschman, Charles, Richard Alba, and Reynolds Farley. 2000. "The Meaning and Measurement of Race in the U.S. Census: Glimpses into the Future." <u>Demography</u> 37: 381-93.

Office of Management and Budget. 2000. <u>Guidance on Aggregation and Allocation of Data on Race for Use in Civil Rights Monitoring and Enforcement</u>. OMB Bulletin No. 00-02, March 9.

United States Bureau of the Census. 1997<u>. Results of the 1996 Race and Ethnic Targeted Test</u>. Population Division Working Paper No. 18, May.

8
Conclusion

Census data users have a wealth of opportunities for analysis of racial and Hispanic origin categories. In fact, the options available for analysis with data from census 2000 are many times greater than was the case with 1990 data. Not only are there many more categories possible for analysis, but the data are also tabulated in many more alternative groupings and formats.

This wealth of options requires many more choices and, unfortunately, also generates much greater confusion among experts and novices alike. In this concluding section we offer some advice about how best to proceed.

Section 1 of this guide laid out six key decisions for shaping how users approach the data. In this concluding discussion we will restrict our attention to certain situations defined by this decision framework. First, we will direct our attention exclusively to the case where data users wish to compare results derived from census 2000 with those of 1990 or 1980. That has proven to be the case where guidance is most often requested.

A second consideration is whether or not the race and Hispanic data are to be considered separately or jointly. For analysis of changes over time, the simplest and cleanest analysis is to merely observe the dichotomy of Hispanic and non-Hispanic populations. However, most users would also want to know about racial changes as well. In locales where the Hispanic or Latino population is less than 10% or so of the total, it might be possible to focus only on race without considering the overlapping Hispanic designation. However, anywhere that the Hispanic population has achieved a sizable minority status, it is desirable to separately identify non-Hispanic portions of racial groups, especially among the white population. As discussed in preceding sections of this guide, there are important philosophical, political and practical considerations that need to be acknowledged when addressing overlap between categories listed in the data.

Even with these conceptual matters addressed, constraints imposed by available data formats may force different choices. The greatest flexibility will be enjoyed in the case of microdata analysis (individual data records collected in the Public Use Microdata

Samples). Most users, however, will be relying on tabulations published in electronic or paper formats. It is to those tabulations that we should direct our attention, because they substantially constrain what can be done in analysis of racial and Hispanic changes.

Previously, in section six of this guide, we summarized the different formats of data available from census 2000, clarifying what can be seen as a bewildering explosion of alternatives made available in 2000 compared to previous census years. Our particular focus has been to explore the various alternatives for reporting the overlap of different racial categories, expressed by individuals who identify with multiple races. Moreover, we incorporate in this investigation the overlap between racial and Hispanic identification. Here we offer recommendations, first, with reference to racial categories alone and, second, with reference to the combination of race and Hispanic origin.

A. Conceptual Rules for Bridging 2000 and 1990 that are Matched to Available Tabulations

Preceding sections have explored many aspects of the overlap between racial categories and between race and Hispanic origin. However, putting those ideas into operation requires close attention to the data that will be most widely and easily available. Recommended procedures pertain to two types of data – population counts and population characteristics. The former are merely counts of the total number of people in different racial categories. Data are then reported from census 2000 on the characteristics of people in many selected categories. Such characteristics include age, family type, and housing type. Whole tables of characteristics are repeated for each of the selected population groups, making for voluminous data reporting if many different racial categories and combinations are used.

A summary of data availability from Summary File 1 (SF1) and Summary File 2 (SF 2) is reported in Exhibit 6. Under the SF 1 tables of count information, exact table numbers are listed that provide each alternative grouping of race and Hispanic origin data. Under the SF 2 tables, all of the tables are repeated for each of the specified race/Hispanic groupings. The one notable omission in the SF 2 set is Hispanic origin for each of the 63 possible race combinations. Lack of that detailed information forces some compromises in bridging methods, as described below. Characteristics to be released in SF 3 follow much the same pattern for the alternative racial and Hispanic groupings as for SF 1. No additional detailed tabulations of count information for local areas are provided beyond that of SF 1 and SF 2. As mentioned, the most flexible format of data to be released from census 2000 consists of the microdata files, but we restrict our attention here to the tables formatted for users by the Census Bureau. Essentially, our goal is to provide bridging solutions achievable with American FactFinder.

The conceptual rules proposed for making the 2000 tabulations comparable to those of 1990 are summarized in Exhibit 7. Separate rules are proposed for the count and characteristics information. Also indicated are the fullest approaches possible with the data, as well as some shortcuts that different analysts have adopted or that seem to be viable solutions.

1. Racial Categories Without Reference to Hispanic Origin

The simplest bridging solutions apply when racial categories are analyzed without any reference to Hispanic origin. For population counts, we have access to the widest possible array of published data. One of the methods tested in the previous section of this guide can be employed. We would recommend equal proportions as a reasonable solution. That method allocates multirace individuals proportionately to the different race categories with which they identify. A good alternative method would be to use survey information on racial identification to reconstruct the probabilities that individuals would identify with only one of the multiple categories they selected in 2000. Although this method in principle comes closest to bridging 2000 and 1990 census responses, a widely accepted and well-grounded set of response probabilities has not yet been produced by the Census Bureau or other scholars.

Two shortcut solutions are outlined in Exhibit 7. One method approximates the results of an equal proportions allocation by simply averaging the counts reported by the Census Bureau for single races alone (a minimum number) and races alone or in any combination (a maximum number). Given that most of the multiracial respondents selected only two races, the average of the two counts only slightly overstates the results of an equal proportion allocation. An alternative shortcut adopted in practice by some analysts has been to follow a sequential tabulation that gives certain races dominance over others when allocating multirace individuals to single categories. The reason that American Indians are listed last, i.e., as a residual after all previous races have been assigned, is that the number of people selecting the American Indian category alone appears to approximate most closely the number that would be expected based on 1990 data.

Much less flexibility is possible in the case of characteristics data pertaining to different racial categories. With SF 1 tables (and in SF 3), a single combined multirace category is reported, with all the specifically identified races restricted to those selecting a single race alone. However, with the SF 2 tables, it is possible to regain exact combinations of multiple races, and, accordingly, it is possible to follow procedures parallel to those for population counts.

2. Racial Categories Combined with a Dominant Hispanic Origin

The second row in Exhibit 7 outlines conceptual solutions that integrate Hispanic origin and racial categorizations. In this scheme, Hispanic origin has categorical dominance: all Hispanics or Latinos are tabulated first, and then each of the remaining non-Hispanics is sorted out racially (producing categories such as non-Hispanic white). Following the outline of data availability shown in Exhibit 6, population counts can be constructed to resemble the 1990 format by following procedures similar to those described for racial categorization alone.

In the case of characteristics data, some substantial obstacles are encountered. With regard to the SF 1 tables, only one joint racial and Hispanic category can be identified (non-Hispanic white). Otherwise, data users would need to address only the

Hispanic/non-Hispanic dichotomy with SF 1 tables of characteristics. More can be accomplished with the SF 2 tables of characteristics. However, a major limitation is that the SF 2 set lacks identification of Hispanic origin (or its complement, non-Hispanic origin) for each of the 63 possible race combinations. For lack of that detailed information, the fullest method possible for addressing joint Hispanic-racial characteristics is that described under the first shortcut method for population counts, namely averaging of the data reported for minimum (race alone) and maximum (alone or in combination) groups. The only further shortcut possible, and one likely to be very widely used, is to simply use only the SF 1 (or SF 3) tables despite categories being defined as race alone and despite the inclusion of Hispanics in all the race categories save non-Hispanic white.

3. Racial Categories Combined with a Hispanic Origin but Leaving other Minority Groups Dominant

The bottom row in Exhibit 7 describes bridging solutions for the alternative case where Hispanic identification is integrated but without Hispanic categorical dominance. In most respects, the tables produced by the Census Bureau make Hispanic categorical dominance the easiest solution. However, close inspection suggests that more accurate usage of characteristics data pertains in the case of minority dominance.

To accomplish a shift in categorical dominance, all that is required is to tabulate some races before Hispanics are removed. As described in an earlier section, a strong case can be made for "keeping whole" the black or African American group, Asian and Pacific Islanders, and American Indians. Hispanics can then be removed from the white category and the "some other race" category (the great majority of whom are Hispanic). One drawback to this approach is that the resulting total of Hispanics is lower than the count reported when Hispanics and non-Hispanics are tabulated without race. (The counter drawback is that when Hispanics are removed from the black category, for example, the total for blacks is lower than when races are tabulated without respect to Hispanic origin.)

In the case of characteristics data, fewer obstacles are encountered with this approach than when Hispanic is made categorically dominant. The same major limitation exists in the set of SF 2 tables, because these lack identification of Hispanic origin (or its complement, non-Hispanic origin) for each of the 63 possible race combinations. However, the SF 1 tables (and SF 3), which are sure to be the most widely used, already are prepared in a format which is race dominant. Data users can simply select the tables for black, Asian (plus Pacific Islander), and American Indians, and then select the table produced for non-Hispanic whites. The one compromise here is to use the complete table of characteristics for Hispanic origin residents. Although this double counts the Hispanic portion of the first three racial categories, those numbers are fairly small relative to the bulk of the Hispanic group which is made of whites and "some other race." Thus, the SF 1 tables (and their SF 3 cousins) are more compatible with another minority dominant definition of Hispanic overlap than they are with the simpler method of categorical Hispanic dominance.

B. Final Observations

The change in race identification questions introduced in Census 2000 has opened a new world of analysis about racial patterns in America. By allowing people to select all of the categories that apply, we now have a much richer view of how Americans self identify with respect to racial categories. A by product of this data collection decision is that we also now have a much broader array of data tabulations reported from Census 2000. This array makes analysis much richer and more complex than in previous censuses.

The special challenge undertaken in this guide has been to address the overlap between the multiple racial categories. Along with this racial overlap, we have taken the opportunity to also address the overlap between racial categories and Hispanic origin, something equally present in the 1990 and 1980 censuses. The multidimensional nature of people's racial and Hispanic identification deserves closer scrutiny. Our goal has been to make more apparent the choices that have been made with less scrutiny in the past. We also have aimed to unveil more of the opportunities provided in the rich array of data tabulations produced from Census 2000. With this guidance, some hard work and some luck, users will be able to usefully track the important changes that have occurred over the last decade for members of many different racial and Hispanic groups.

Exhibit 1. Overlap of Racial Categories and Hispanic Origin

American Indian

Black

Hispanic or Latino
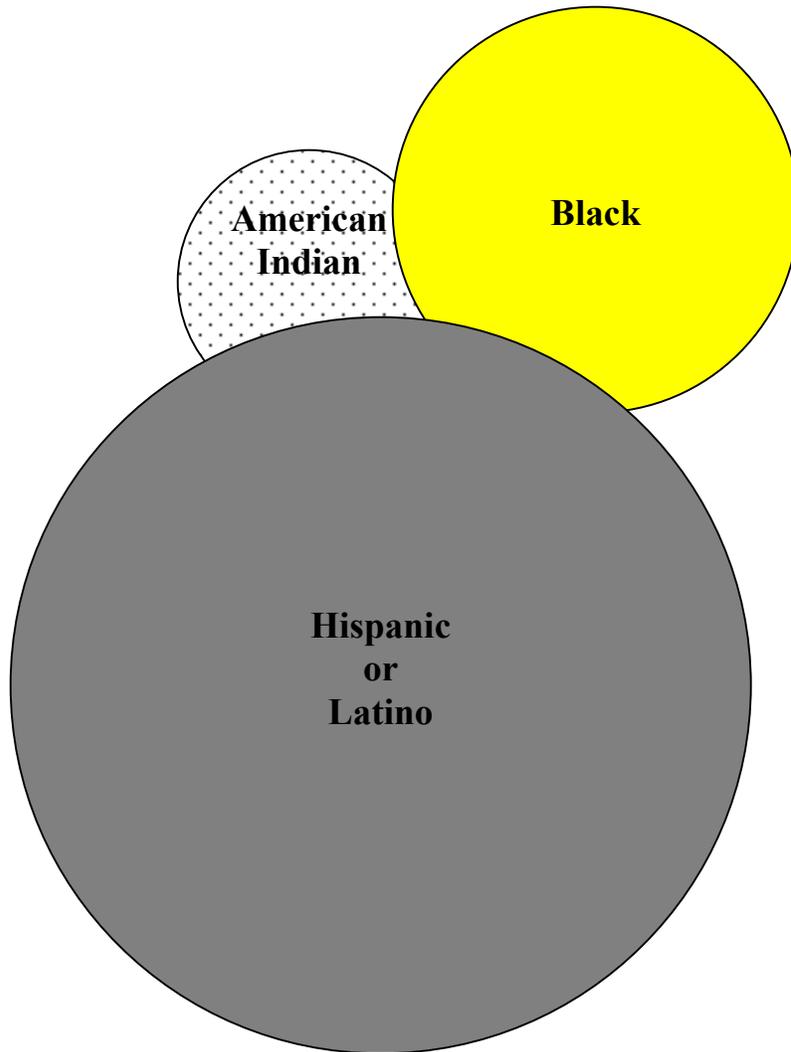
Exhibit 2. Racial Distribution of the Population

for Texas: 2000

	Total Population in Each Category		Share (%) of Population	
Single Race				
White	14,799,505		71.0	
Black	2,404,566		11.5	
American Indian (AIAN)	118,362		0.6	
Asian	562,319		2.7	
Native Hawaiian (NHOPI)	14,434		0.1	
Other	2,438,001		11.7	
Multiracial Persons	514,633		2.5	
2 races		494,972		2.4
White & Black		40,094		0.2
White & AIAN		67,407		0.3
White & Asian		44,486		0.2
Black & AIAN		7,563		0.0
Other Bi-racial		335,422		1.6
White & Other		*267,739*		*1.3*
Black & Other		*23,062*		*0.1*
AIAN & Other		*8,579*		*0.0*
Asian & Other		*17,067*		*0.1*
NHOPI & Other		*2,499*		*0.0*
3 or more races		19,661		0.1
Total Population	20,851,820		100.0	

Source: Analysis by the Race Contours Project of the "Census 2000 Demonstration Disc-- Public Law 94-171 Redistricting Data"

Exhibit 3. Percent of Persons with a Given Racial Identification Who Share Additional Racial Identifications

for Texas: 2000

	White	Black	Am Ind	Asian	NHOPI	Other
% Monoracial	97.1	96.5	54.9	87.3	49.6	88.1
% Multiracial	2.9	3.5	45.1	12.7	50.4	11.9
% 2 Races	*2.8*	*3.1*	*40.2*	*11.4*	*37.1*	*11.5*
% 3+ Races	*0.1*	*0.5*	*4.9*	*1.4*	*13.3*	*0.3*
Total	100	100	100	100	100	100
Total (N)	15,240,387	2,493,057	215,599	644,193	29,094	2,766,586

	White	Black	Am Ind	Asian	NHOPI	Other
White	97.1	1.6	31.3	6.9	12.0	9.7
Black	0.3	96.5	3.5	0.8	3.9	0.8
Am Ind	0.4	0.3	54.9	0.4	0.8	0.3
Asian	0.3	0.2	1.3	87.3	11.7	0.6
NHOPI	0.0	0.0	0.1	0.5	49.6	0.1
Other	1.8	0.9	4.0	2.6	8.6	88.1
More than 2 race	0.1	0.5	4.9	1.4	13.3	0.3
Total	100	100	100	100	100	100
Total (N)	15,240,387	2,493,057	215,599	644,193	29,094	2,766,586

Note: Shaded area is percent of each maximum racial group that is a single race alone

Note: The Universe for these tabulations 'double counts' persons who appear in more than one
racial category. For example, the multiracial percent among whites is calculated
on the basis of all persons who claim any portion white heritage.

Source: Dowell Myers, Race Contours 2000, a collaborative USC-U.Michigan project.

http://www.usc.edu/sppd/census2000

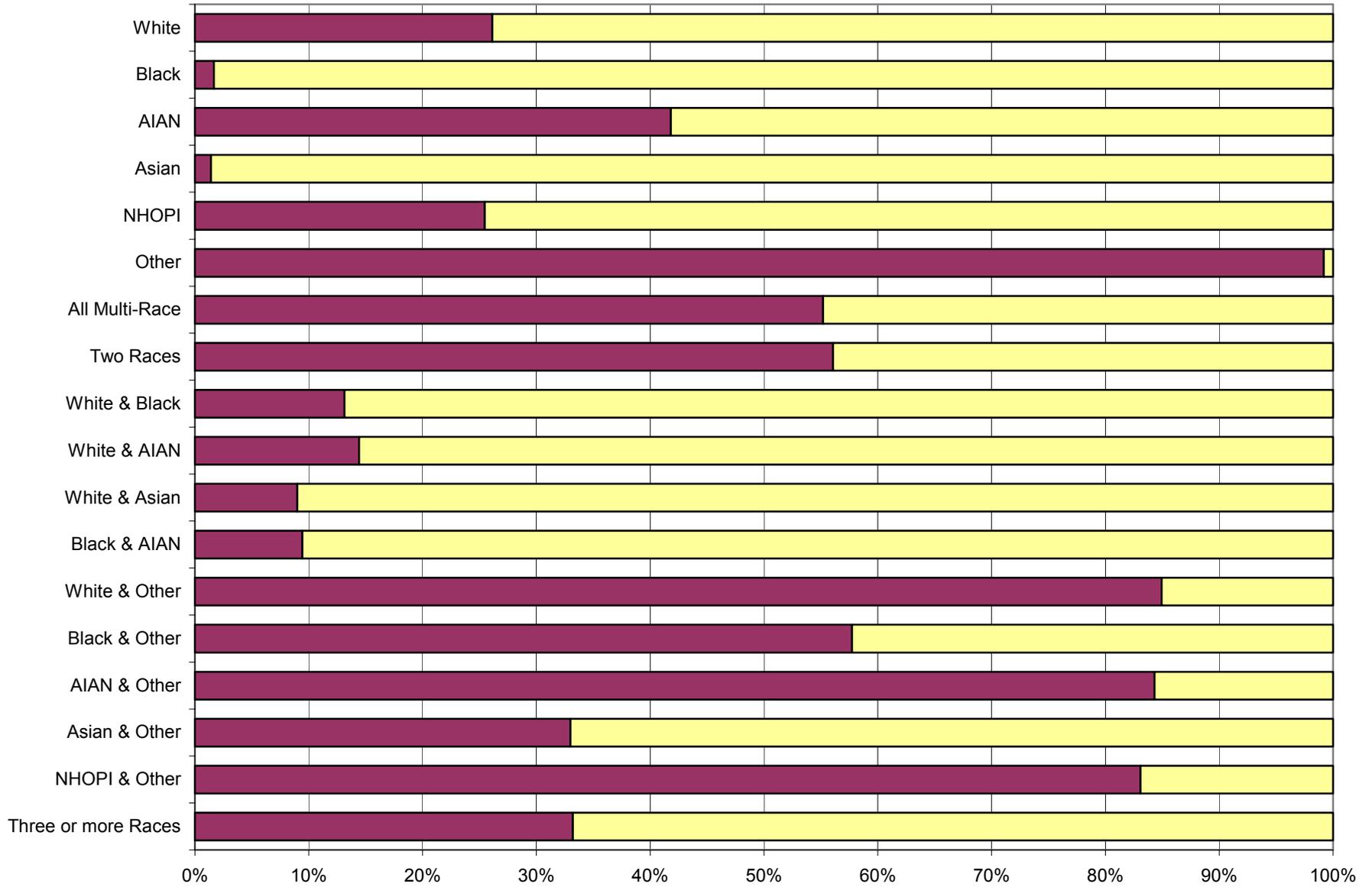# Exhibit 4. % Hispanic of Each Race Category in Texas, 2000

Exhibit 5a.
Situation A: Maximize Hispanic Population by Hispanic Dominance, With Alternative Allocation of Multiracials for Comparability to 1990

Table 1: Hispanic Dominant A
Ignoring Race Categories

	1990	2000
Hispanic	60,007	77,320
Non-Hispanic	309,358	300,421
Total	369,365	377,741
	C90STF1A P10	PL2

Table 2: Hispanic Dominant A
Including Race Categories

	1990	2000
Hispanic	60,007	77,320
Non-Hispanic		
White	197,157	161,201
Black	54,609	56,172
AIAN	3,492	9,180
Asian	53,185	55,259
NHOPI		2,008
Other	915	3,305
Multiple	--	13,296
Total	369,365	377,741
	C90STF1A P10	PL2

Table 3: Hispanic Dominant A With
Double Counting of Multiracials

	1990	2000
Hispanic	60,007	77,320
Non-Hispanic		
White	197,157	169,517
Black	54,609	60,866
AIAN	3,492	14,240
Asian	53,185	60,006
NHOPI		5,190
Other	915	5,093
Multiple	--	--
Total	369,365	392,232
	C90STF1A P10	P9, 13, 17,21,25,29

Table 4: Hispanic Dominant A With
Fractional Apportionment of Multiracials

	1990	2000
Hispanic	60,007	77,320
Non-Hispanic		
White	197,157	165,194
Black	54,609	58,386
AIAN	3,492	11,599
Asian	53,185	57,544
NHOPI		3,548
Other	915	4,149
Multiple	--	--
Total	369,365	377,741
	C90STF1A P10	PL2

Table 5: Hispanic Dominant A With
Fractional Apportionment of Multiracials,
but with White Reduction

	1990	2000
Hispanic	60,007	77,320
Non-Hispanic		
White	197,157	161,201
Black	54,609	59,605
AIAN	3,492	12,684
Asian	53,185	58,811
NHOPI		3,692
Other	915	4,428
Multiple	--	--
Total	369,365	377,741
	C90STF1A P10	PL2

Table 6: Hispanic Dominant A With
Allen-Turner Apportionment of Multiracials

	1990	2000
Hispanic	60,007	77,320
Non-Hispanic		
White	197,157	166,651
Black	54,609	59,151
AIAN	3,492	10,201
Asian	53,185	56,716
NHOPI		3,587
Other	915	4,116
Multiple	--	--
Total	369,365	377,741
	C90STF1A P10	PL2

Source: Analysis by the Race Contours Project of the "Census 2000 Demonstration Disc--Public Law 94-171 Redistricting Data," issued Oct. 2000; Sacramento City Dress Rehearsal 100% Summary Data table PL2; "Census 2000 Dress Rehearsal Disc," issued 1999, Table P9,13,17,21,25,29; 1990 Census Summary Tape File 1 (STF1)-Sacramento City 100% count table P10.

Exhibit 5b.
Situation B: Partial Hispanic Dominance, with Alternative Allocation of Multiracials for Comparability to 1990

Table 5: Hispanic Dominant B
Including Multiracial Categories

	1990	2000
Black	56,521	58,443
AIAN	4,561	11,270
Asian	52,973	56,877
NHOPI	2,453	2,388
Hispanic	54,785	70,961
Non-Hispanic		
White	197,157	161,201
Other	915	3,305
Multiple	--	13,296
Total	369,365	377,741

C90STF1A P7, P10   PL1, 2

Table 6: Hispanic Dominant B With
Double Counting of Multiracials

	1990	2000
Black	56,521	64,503
AIAN	4,561	17,966
Asian	52,973	63,081
NHOPI	2,453	6,072
Hispanic	54,785	73,752
Non-Hispanic		
White	197,157	169,517
Other	915	5,093
Multiple	--	--
Total	369,365	399,984

C90STF1A P7, P10   P9, 13, 17,21,25,29
Summary Table

Table 7: Hispanic Dominant B
With Fractional Apportionment in 2000

	1990	2000
Black	56,521	61,277
AIAN	4,561	14,447
Asian	52,973	59,830
NHOPI	2,453	4,152
Hispanic	54,785	68,693
Non-Hispanic		
White	197,157	165,194
Other	915	4,149
Multiple	--	--
Total	369,365	377,741

C90STF1A P7, P10   PL1, 2

Table 8: Hispanic Dominant B With
Fractional Apportionment of Multiracials,
but with White Reduction

	1990	2000
Black	56,521	62,690
AIAN	4,561	15,982
Asian	52,973	61,360
NHOPI	2,453	4,325
Hispanic	54,785	67,756
Non-Hispanic		
White	197,157	161,201
Other	915	4,428
Multiple	--	--
Total	369,365	377,741

C90STF1A P7, P10   PL1, 2

Table 9: Hispanic Dominant B With
Allen-Turner Apportionment of Multiracials

	1990	2000
Black	56,521	62,161
AIAN	4,561	12,585
Asian	52,973	58,814
NHOPI	2,453	4,174
Hispanic	54,785	69,239
Non-Hispanic		
White	197,157	166,651
Other	915	4,116
Multiple	--	--
Total	369,365	377,741

C90STF1A P7, P10   PL1, 2

Table 10: Hispanic Dominant B With
Allen-Turner Apportionment of Multiracials,
but with White Reduction

	1990	2000
Black	56,521	63,474
AIAN	4,561	15,386
Asian	52,973	61,096
NHOPI	2,453	4,420
Hispanic	54,785	67,746
Non-Hispanic		
White	197,157	161,201
Other	915	4,418
Multiple	--	--
Total	369,365	377,741

C90STF1A P7, P10   PL1, 2

Source: Analysis by the Race Contours Project of the "Census 2000 Demonstration Disc--Public Law 94-171 Redistricting Data," issued Oct. 2000, Sacramento City Dress Researal 100% Summary Data table PL1,2; "Census 2000 Dress Rehearsal Disc," issued April1999, Table P9,13,17,21,25,29, and Summary Table; 1990 Census Summary Tape File 1 (STF1)-Sacramento City 100% count table P7 and P10.

Exhibit 6. Tables of Population Counts and Characteristics Reported by Race and Hispanic Origin, by Source of Data (SF1 or SF2)

	Counts		Characteristics	
	SF1	SF2	SF1	SF2
Alternative Tabulated Race Groupings:				
Six Major Race Categories (single race alone)	(DP1)	all	all	all
Six Major Race Categories (alone or in combination with unspecified other races)	(DP1)	all	--	all
Non-Hispanic Six Major Race Categories (single race alone)	(P9)	all	note 1	all
Non-Hispanic Six Major Race Categories (alone or in combination with unspecified other races)	(P10)	all	--	all
All 63 possible race combinations	(P3)	all	--	all
Non-Hispanic All 63 possible race combinations	(P4)	--	--	--
Detailed Asian (alone or in combination)	--	all	--	all
Detailed Amer Indian & Alaska Native Tribes (alone or in combination)	--	all	--	all
Detailed Hispanic	--	all	--	all

Notes:

Table numbers are listed in ( ); "all" indicates that the counts or characteristics data are repeated throughout the data file

1. Non-Hispanic White is the only joint category of single race alone and Non-Hispanic origin displayed in SF1 characteristic tables

2. "--" indicates data not available

Exhibit 7. Conceptual Rules for Converting Multiple Race Combinations Provided in Census Bureau Tables When Making Comparisons of 2000 and 1990

| | Population Counts | | Characteristics | |
	Fullest Approach	Shortcuts	Fullest Approach	Shortcuts
Ignore Hispanic Origin	Equal racial proportion allocation --or-- Racial survey based allocation (to be determined)	Compute average of minimum (race alone) and maximum (alone or in combination) counts --or-- Sequential tabulation: 1. All Blacks alone or in combination 2. All remaining Asians & Pacific Islanders alone or in combination 3. All remaining Whites alone or in combination 4. All remaining American Indians	With SF 1 tables, must ignore multirace and only use single race alone tabulations --or-- With SF 2 tables, same rules can be followed as for fullest approach of pop counts	Use only SF 1 tables --or-- With SF 2 tables, use same shortcut rules defined for pop counts
Hispanic Categorical Dominance	Sequential tabulation: 1. Tabulation of all Hispanics 2. On remaining, Non-Hispanic population perform equal racial proportion allocation or racial survey based allocation (to be determined)	Tabulation of all Hispanics, and for remaining Non-Hispanic population compute average of minimum (race alone) and maximum (alone or in combination) counts --or-- Sequential tabulation: 1. All Hispanics 2. All Blacks alone or in combination (non-Hispanics only) 3. All remaining Asians & Pacific Islanders alone or in combination (non-Hispanics only) 4. All remaining Whites alone or in combination (non-Hispanics only) 5. All remaining American Indians (non-Hispanics only)	With SF 1 tables, only Hispanic/non-Hispanic (ignoring race) can be addressed, with one exception, i.e. Non-Hispanic White --or-- With SF 2 tables, incomplete tabulation by Hispanic origin means only the first shortcut method defined for pop counts can be employed	Use only SF 1 tables, despite Hispanics double counted in races --or-- With SF 2 tables, incomplete tabulation by Hispanic origin means only the first shortcut method defined for pop counts can be employed
Other Minority Categorical Dominance	Sequential tabulation: 1. Equal racial proportions or racial survey allocation 2. Tabulation of totals for following groups: Am. Indian, Asian and Pacific Isl, and Black 3. Tabulation of all Hispanics not overlapped in (2) 4. Tabulation of all Non-Hispanic whites or "others"	For Am. Indian, Asian and Pacific Isl, and Black, compute average of minimum (race alone) and maximum (alone or in combination) counts, followed by tabulation of all Hispanics not in those race groups, followed by average of minimum and maximum counts for remaining Non-Hispanic whites ; ignore "others" --or-- Sequential tabulation: 1. All Blacks alone or in combination 2. All remaining Asians & Pacific Islanders alone or in combination 3. All remaining American Indians alone or in combination (except whites removed) 4. All remaining Hispanics not classified in the preceding races 5. All remaining Whites alone or in combination (non-Hispanics only)	With SF 2 tables, incomplete tabulation by Hispanic origin means only the first shortcut method defined for pop counts can be employed	With SF 1 tables, use "race alone" characteristics for Am. Indian, Asian and Pacific Isl, and Black, followed by Non-Hispanic white characteristics; and use Hispanic characteristics (comprised mostly of Hispanic whites and "others") --or-- With SF 2 tables, incomplete tabulation by Hispanic origin means only the first shortcut method defined for pop counts can be employed

45

Appendix A

Questions about Spanish Origin and Race Asked on Censuses Since the Civil Rights Decade

CENSUS OF 1970
(Asked of Everyone)

Color or Race Question (100%)

```
4. COLOR OR RACE

    Fill one circle

    If "Indian (American)," also give tribe.

    If "Other," also give race.
    _____

    O White          O Japanese      O Hawaiian
                     O Chinese       O Korean
    O Negro          O Filipino      O Other--Print race ▷
       or Black

    O Indian (Amer.)
         Print tribe ➜   [_____]
```

Spanish Origin (Asked of 5% of Population)

```
b. Is this person's origin or descent-- (Fill one circle)

    O  Mexican          O  Central or South American
    O  Puerto Rican     O  Other Spanish
    O  Cuban            O  No, none of these
```

CENSUS OF 1980
(Asked of Everyone)

a) Race Question (100%)

```
4. Is this person —     O  White          O  Asian Indian
                        O  Black or Negro O  Hawaiian
   Fill one circle      O  Japanese       O  Guamanian
                        O  Chinese        O  Samoan
                        O  Filipino       O  Eskimo
                        O  Korean         O  Aleut
                        O  Vietnamese     O  Other – Specify ▷
                        O  Indian (Amer.)
                           Print
                           tribe  ➜ _____
```

b) Spanish Origin Question (100%)

```
7. Is this person of Spanish/Hispanic    O  No (not Spanish/Hispanic)
   origin or descent                     O  Yes, Mexican, Mexican-Amer., Chicano
                                         O  Yes, Puerto Rican
   Fill one circle                       O  Yes, Cuban    ■
                                         O  Yes, other Spanish/Hispanic
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CENSUS OF 1990
(Asked of Everyone)

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4. Race                                     O White
   Fill ONE circle for the race that the    O Black or Negro
   person considers himself/herself to be.  O Indian (Amer.) (Print the name of the
                                               enrolled or principal tribe ▷
      If Indian (Amer.), print the name of   [_____]
      the enrolled or principal tribe. ➜
                                            O Eskimo
                                            O Aleut
                                              Asian or Pacific Islander (API)
                                            O Chinese       O Japanese
      If Other Asian or Pacific Islander    O Filipino  ■   O Asian Indian
      (API) print one group, for example:   O Hawaiian      O Samoan
      Hmong, Fijian, Laotian, Thai,         O Korean        O Guamanian
      Tongan, Pakistani, Cambodian,         O Vietnamese    O Other API
      and so on. ➜
                                            O Other race (Print race) ➜
      If Other race, print race. ➜

5. Age and year of birth                 a. Age        b. Year of birth

   a. Print each person's age at last    0 0 0 0 0   1 ● 0 0 0 0 0
      birthday. Fill in the matching     1 O 1 O 1 O  9 O 1 O 1 O
      circle below each box.                2 O 2 O        2 O 2 O
                                            3 O 3 O        3 O 3 O
   b. Print each person's year of birth     4 O 4 O ■      4 O 4 O
      and fill the matching circle below    5 O 5 O        5 O 5 O
      each box.                             6 O 6 O        6 O 6 O
                                            7 O 7 O        7 O 7 O
                                            8 O 8 O        8 O 8 O
                                            9 O 9 O        9 O 9 O

6. Marital status                        O Now married    O Separated
                                         O Widowed        O Never married
   Fill ONE circle for each person.      O Divorced

7. Is this person of Spanish/Hispanic    O No (not Spanish/Hispanic)
   origin?                               O Yes, Mexican, Mexican-Am., Chicano
                                         O Yes, Puerto Rican
   Fill ONE circle for each person.      O Yes, Cuban   ■
                                         O Yes, Other Spanish/Hispanic
                                            (Print one group, for example,
                                            Argentinean, Columbian,
                                            Dominican, Nicaraguan,
   If Yes, other Spanish/Hispanic,          Salvadoran, Spaniard, and so on.) ▷
   print one group. ➜                    [_____]
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CENSUS OF 2000
(Asked of Everyone)

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➜ NOTE: Please answer BOTH Questions 7 and 8.

7. Is Person 1 Spanish/Hispanic/Latino? Mark [X] the "No"
   box if not Spanish/Hispanic/Latino
   ☐ No, not Spanish/Hispanic/Latino      ☐ Yes, Puerto Rican
   ☐ Yes, Mexican, Mexican Am., Chicano   ☐ Yes, Cuban
   ☐ Yes, other Spanish/Hispanic/Latino -- Print group. ▷
   [_____]

8. What is Person 1's race? Mark [X] one or more races to
   indicate what this person considers himself/herself to be.
   ☐ White
   ☐ Black, African Am., or Negro
   ☐ American Indian or Alaska Native -- Print name of enrolled or principal tribe. ▷
   [_____]

   ☐ Asian Indian  ☐ Japanese    ☐ Native Hawaiian
   ☐ Chinese       ☐ Korean      ☐ Guamanian or Chamorro
   ☐ Filipino      ☐ Vietnamese  ☐ Samoan
   ☐ Other Asian -- Print race. ▷  ☐ Other Pacific Islander -- Print race. ▷
   [_____]

   ☐ Some other race -- Print race. ▷
   [_____]

➜ If more people live here, continue with Person 2.
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Source: Farley, Reynolds. Population Studies Center, Institute for Social Research, University of Michigan; September 2000.