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# Measuring Ethnicity with U.S. Census Data: Implications for Mexicans and Arabs

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**Abstract** U.S. racial and ethnic populations can be defined by a number of census questions—race/ethnicity, ancestry, place of birth, and/or language—but little is known about how using alternative definitions of identity affect the size and characteristics of different groups. This article examines this question using combined data from the 1 % and 5 % Public Use Microdata Samples in census 2000, using Mexicans and Arabs as case studies. The analysis uses the standard method of classifying these groups (Hispanic origin and Arab ancestry) as a baseline to explore differences across the range of possible permutations of ethnic identity. In the Arab case, persons captured using alternative definitions of identity (Arabic language at home and/or born in an Arab country) are lesser educated, more likely to be in poverty, and more likely to identify as non-white or multi-racial than the Arab population as a whole. In contrast, persons in the Mexican alternative definition group (Mexican ancestry and/or born in Mexico) are more highly educated, less likely to be in poverty, and more likely to identify as white than the Mexican population as a whole. The article concludes with research and policy implications of these findings.

**Keywords** Definitions of ethnicity · Population estimates · Arab · Mexican

## Introduction

The question of how a society defines the composition of its population lies at the heart of research on social inequality, because ultimately, unequal access to and distribution of society's goods and resources are based on those definitions (Bonilla-Silva 2003; Conley 1999; Foner 2005; Oliver and Shapiro 1995). In

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current day America, racial and ethnic group membership is arguably one of the most powerful mechanisms for organizing difference and for limiting access to societal goods, including but not limited to desirable housing, quality healthcare, adequate schooling, safe employment, and legitimate political representation (Almaguer and Jung 1999; Massey 2008; Massey and Denton 1993; Stewart and Dixon 2010).

Given the salience of racial and ethnic group membership for defining life chances, it seems reasonable to ask how societies classify their populations. Morning (2008) did just that offering an excellent overview and systematic typology of racial and ethnic classification systems in 141 nations. Similarly, Perez and Hirshcman (2009) used the 2000 census data to provide an in-depth examination of the racial and ethnic reporting by whites, blacks, Asians, and Hispanics. They focused specifically on responses to the race and ethnicity questions rather than ancestral origin, arguing that the former represented more subjective measures of identity than the latter. More recently, Gullickson and Morning (2011) used the ancestry questions on the 1990 and 2000 census to expand the traditional definition of multiracial—that relies on race alone—to identify a broader population that considers itself multiracial.

This article extends these studies to examine the demographic and socioeconomic *consequences* of different enumerations strategies, using Mexicans and Arabs as case studies. A primary contribution of this article is in identifying whether and how different operationalizations of ethnicity result in different patterns among ethnic groups in terms of their size, racial identifications, and socioeconomic profiles. In turn, this can have important policy implications for understanding which groups may be more or less in need of government assistance across a range of consequential outcomes, including education, housing, and healthcare. The Arab and Mexican populations are particularly the useful cases because both groups can be identified by a diverse range of census identity categories (ethnicity, ancestry, place of birth, and/or language). However, each group is typically categorized using only one identifier: the Hispanic ethnicity question for Mexicans and ancestry question for Arabs (Brittingham and de la Cruz 2005; Dallo et al. 2008; Ramirez 2005). Thus, these groups offer a unique opportunity to compare the implications of using different operational definitions of ethnicity and assess their utility for understanding changing dynamics of racial and ethnic group categorization.

This article uses combined data from the 1 % and 5 % Public Use Microdata Samples (PUMS) in census 2000 to address these questions. The combined data allow for larger sample sizes, which is important for examining smaller populations such as Arabs. The analysis uses the standard method of classifying these groups (Hispanic origin question for Mexicans and ancestry question for Arabs) as a baseline to explore differences across the range of possible permutations of identity. In the Arab case, the analysis adds Arabic language and Arab country of birth as possible permutations of identity, and in the Mexican case, the analysis adds Mexican ancestry and Mexico as place of birth. Language is excluded from the Mexican case because "Spanish" is native to other ethnic groups.

## Shifting Definitions of Race and Ethnicity

Over the past few decades, academic debates have changed how scholars conceptualize and define U.S. racial and ethnic populations (Frank et al. 2010; Gullickson and Morning 2011; Hirschman 2004; Krysen and Lewis 2004; Lee and Bean 2004). Once viewed as ascribed biological categories, social scientists now emphasize the social construction of race and ethnicity and conceptualize group identity as an important component of individuals' subjective self-definitions (Calhoun 1994; Lee and Bean 2004; Waters 1990). Most scholars agree that racial and ethnic identity is not merely only an objective social category, but also an individually-negotiated, culturally-embedded meaning system produced in specific historical contexts (Foner 2005; see review by Frable 1997). Historical context is critical. Group identities—some achieved and some ascribed—emerge and exist within structural constraints that vary over time and space (Portes and Rumbaut 2001; Waters 1990).

One such structural constraint is reflected in nation-state policies on population definition and enumeration. In the United States, the Census Bureau plays a powerful role in shaping not only the government's official count of the population, but also public and private sector agencies that conform to federal standards on most of their policies and forms (Samhan 1999; Snipp 2003). A historical turning point came in 1977, when the Federal Office of Management and Budget established an official classification schema for measuring race and ethnicity, which was then revised in 1997. In the 2000 census, respondents were first asked to identify whether or not they were of Hispanic/Latino origin followed by a question on their racial identification(s), which allowed them to choose one or more responses from several racial categories. As noted by Snipp (2003, p. 563), this two-question, multi-response typology "may profoundly affect the way policymakers and the American public think about race." It affects who has access to important resources, such as political representation or financial assistance in housing and education, and defines minority group status vis-à-vis the majority population.

Despite the import of these widely-used official racial/ethnic categories, there remains a dearth of research on the origins and implementation of these categories and on the social and policy implications of their use (Snipp 2003). In the contemporary U.S. context, the Arab and Mexican populations offer an opportunity to contribute to a growing body of work that attempts to address the implications of different operationalizations of ethnicity (Gullickson and Morning 2011; Morning 2008; Perez and Hirshcman 2009). They serve as useful case studies for several reasons. First, the term "Arab" refers to a pan-ethnicity and "Mexican" to a singular ethnic group subsumed within the larger pan-ethnic categories of "Latino" and "Hispanic." Thus, they represent two unique cases for comparing alternative methods of defining ethnic identity. Second, both groups are at the center of much political and social debate, albeit for different reasons. In the Mexican case, concerns over illegal immigration and the perceived attendant drains on the welfare system fuel interest in the size and mobility of this group (Fox 2004; Hunt 2007). In the Arab case, the global war on terror coupled with the post-9/11 climate of fear in

the United States has stimulated intense efforts to locate, identify, enumerate, and characterize this group (Read 2008).

Third, both groups can be defined theoretically by any number of questions on the decennial census; however, the methods used to classify and enumerate the Mexican and Arab populations in the last decennial census relied on single identifiers (U.S. Bureau of the Census 2000). In the Mexican case, the marker was the Hispanic origin question on the short form of the census, which was administered to all U.S. households. The question read, "Is this person Spanish/Hispanic/Latino? Mark the "No" box if not Spanish/Hispanic/Latino." The response categories included: "No, not Spanish/Hispanic/Latino; Yes, Mexican, Mexican Am., Chicano; Yes, Puerto Rican; Yes, Cuban; Yes, other Spanish/Hispanic/Latino—Print group." One important problem with the wording of the question is that it forced singular responses, thereby failing to capture multi-ethnics (for example, those with a Puerto Rican mother and Mexican father). In the Arab case, the primary identifier was an open-ended ancestry question on the long-form census, which was administered to only one in six U.S. households. The question read, "What is this person's ancestry or ethnic origin? (for example, Italian, Jamaican, African Am., Cambodian, Cape Verdean, Norwegian, Dominican, French Canadian, Haitian, Korean, Lebanese, Polish, Nigerian, Mexican, Taiwanese, Ukrainian, and so on)." Respondents could provide up to two ancestral origins (U.S. Bureau of the Census 2005). Finally, both groups are useful case studies because both are minority populations who continue to receive a proportionally large number of immigrants, which has implications for the future demographic and social profile of these groups (Cresce and Ramirez 2003; U.S. Bureau of the Census 1990, 2000, 2005).

Beyond these similarities, each group has a unique historical narrative regarding racial and ethnic classification in the United States. The Arab story dates back to the early part of the twentieth century, when Arab immigrants (mainly from Syria) were denied citizenship on the grounds that they did not meet the racial prerequisites for citizenship established in the 1790 Naturalization Act (Naff 1994; Suleiman 1999). This act limited citizenship to free white persons, which was primarily defined as those of European descent (Samhan 1999). In 1915, George Dow, a Syrian immigrant, took his case to the Fourth Circuit Court and succeeded in establishing the legal precedent that Syrians meet the racial prerequisite for naturalization. However, several other court cases resulted in contradictory outcomes for Arabs over the next three decades. Finally, in 1940s, the U.S. Census Bureau took the official position that Arab-Americans were to be treated like Italian-Americans, Greek-Americans, and other European immigrant communities in terms of their racial classification as white (Suleiman 1999).

By the early 1980s, however, Arab American community leaders began calling for more attention to ancestry data that captured Arab ethnicity, arguing that their racial classification as "white" absorbed important demographic diversity among Arab Americans and failed to provide critical data needed to lobby on their behalf (Samhan 1999; Zogby 1990). Although some feel that the census undercounts Arab Americans, most agree that ancestry data remain the most comprehensive information currently available for studying Arab Americans (for a review see

Read 2004). Based on the census 2000, the combined ancestry responses documented 1.19 million persons of Arab ancestry in the United States, which represented a 40 % increase over the last decade from 860,000 persons in 1990s (U.S. Bureau of the Census 2003a).

The narrative for Mexicans similarly begins in the early part of the twentieth Century when in 1930, for the first and only time, "Mexican" was classified as a race (Gibson and Jung 2002). Enumerators were instructed to record all persons who had been born in Mexico or whose parents had been born in Mexico and who did not fall into another racial category as "Mexican." It was subsequently dropped as a racial category, and from 1940 until 1970 various other indicators were used to identify the Hispanic population, such as Spanish mother tongue and Spanish surname. In 1969, the Hispanic/Latino origin question was tested on the Current Population Survey, added to the 5 % short form of the 1970 census, and moved permanently to the 100 % form in 1980 (Perez 2008; Ramirez 2005). Today, the primary method for identifying Mexican Americans is with responses to the Hispanic/Latino origin question (Gibson and Jung 2002). The ancestry and place of birth questions are used less frequently, in part because some contend that "trying to develop a composite measure of Hispanic ethnicity using a combination of responses from the Hispanic origin, place of birth, and ancestry questions undermines the principle of self-identification and can lead to endless discussion about who is 'Hispanic' and what is the size of the Hispanic population" (Cresce and Ramirez 2003, p. 7). Although Cresce and Ramirez were focusing specifically on "Hispanic" rather than "Mexican," their argument would also apply to defining the Mexican population. However, this approach is problematic because it overlooks the fact that respondents are forced to choose single-ethnic identifiers, when in fact, they may have multiple ethnic identities. Accordingly, this article takes a different stance and builds on the work of Gullickson and Morning (2011) to argue that the ancestry and place of birth questions are also methods of ethnic group identification.

In sum, the Arab and Mexican cases offer unique opportunities to examine whether and how alternative definitions of group identity alter what we know about the size, racial identifications, and socioeconomic profile of these groups. To examine this question, the analysis focuses on four objectives: (1) to identify and compile a list of the full range of possible identity categories using questions on Hispanic origin and ancestry (Mexican case) and place of birth, ancestry, and language (Arab case); (2) to determine the extent of overlap in the aforementioned identity categories to assess their salience for each group. For example, what proportion of Mexicans identified by the Hispanic origin question is also Mexican by place of birth and/or ancestry? (3) to calculate the percentage change in the size of the group based on the various identity categories to determine the extent to which each category might/might not meaningfully impact the overall group. For example, to what extent does the addition of persons speaking Arabic at home increase the size of standard classification of the Arab population (and so forth with all possible permutations)? (4) to assess changes in the sociodemographic characteristics of the Mexican and Arab populations when alternative definitions of ethnic identity are employed.

## Data and Method

Data for this study consist of the combined 1 % and 5 % PUMS from census 2000. The 1 % and 5 % PUMS files comprise separate cases selected from the same long-form census data file (U.S. Bureau of the Census 2003b), so combining them allows an increase in effective sample size without duplicating individuals (see e.g., Cotter et al. 1999). To make each file representative of the entire population, the 1 % PUMS file weights average 100, and the 5 % PUMS file weights average 20, although the underlying weights are the same. To combine the files and create comparable weights, I multiplied the 1 % PUMS file weights by 0.1667 and the 5 % PUMS file weights by 0.8333. The resulting combined file has an average weight of $\sim$16.67, and the summed weights equal the total population, as in each of the original files.

The sample size for Arabs and Mexicans varies in each section of the analysis based on the different definitions used (listed in each table and figure). The analytic strategy is to extend standard methods of classification to include other potential markers of group identity. In the Arab case, the analysis extends the standard ancestry classification for Arabs to consider place of birth (Arab countries)[1] and language at home (Arabic). Among these respondents, I analyze ancestry responses and exclude cases that clearly suggest that the persons are non-Arab (e.g., persons that respond "Italian" to the ancestry question). In the Mexican case, the analysis extends the standard Hispanic origin definition to include place of birth (Mexico) and ancestry (Mexican, Chicano). Inclusion of alternative Mexican is limited to respondents who identify their Hispanic origin as 'Other Spanish or Latino' or 'Not Hispanic Latino.' Spanish language cannot be used to identify the Mexican population because it is a language shared with other Hispanic origin groups.

For ease of presentation and interpretation, the analysis and results are separated into two sections; the first section focuses on Arabs and the second on Mexicans. I use this organization strategy because there are unique methods for identifying each group, and the implications of using alternative definitions of identity are different for each group. Within each section, I first describe standard and alternative methods for defining the Arab and Mexican populations and assess how alternative definitions of identity alter the size of the populations. Then, I examine whether and how alternative definitions change the demographic and socioeconomic profile of each group. Finally, I assess the extent to which these definitions alter the profile of the Arab and Mexican populations relative to averages for the U.S. population as a whole. Tables 1, 2, 3, and Fig. 1 address the Arab case and Tables 4, 5, 6, and Fig. 2 address the Mexican one. The text in each of the following sections is organized as similarly as possible for clarity.

[1] Arab countries include Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Oman, Qatar, Saudi Arabia, Syria, Tunisia, United Arab Emirates, Yemen.

**Table 1** Standard and alternative methods for classifying the Arab population census 2000

| Standard methods | | | | Alternative methods | | | |
|---|---|---|---|---|---|---|---|
| Ancestry 1 | *N* | Ancestry 2 | *N* | Place of birth | *N* | Language | *N* |
| Algerian | 835 | Algerian | 195 | Algeria | 11,132 | Arabic | 149,962 |
| Arab | 77,012 | Arab | 10,059 | Bahrain | 444 | | |
| Arabic | 110,598 | Arabic | 11,045 | Egypt | 116,753 | | |
| Berber | 208 | Berber | 18 | Iraq | 93,484 | | |
| Egyptian | 133,057 | Egyptian | 9,150 | Jordan | 50,547 | | |
| Gaza Strip | 16 | Gaza Strip | 0 | Kuwait | 22,094 | | |
| Iraqi | 32,421 | Iraqi | 4,247 | Lebanon | 111,111 | | |
| Jordanian | 39,264 | Jordanian | 2,143 | Libya | 1,231 | | |
| Kurdish | 1,432 | Kurdish | 17 | Morocco | 40,993 | | |
| Kuwaiti | 575 | Kuwaiti | 0 | Oman | 188 | | |
| Lebanese | 355,206 | Lebanese | 91,412 | Qatar | 286 | | |
| Libyan | 309 | Libyan | 18 | Saudi Arabia | 28,303 | | |
| Mideast | 25,278 | Mideast | 3,188 | Syria | 54,835 | | |
| Moroccan | 33,651 | Moroccan | 5,851 | Tunisia | 1,100 | | |
| N. African | 700 | N. African | 33 | UAE | 1,398 | | |
| Omani | 61 | Omani | 0 | Yemen | 19,924 | | |
| Palestinian | 71,034 | Palestinian | 5,156 | | | | |
| Qatari | 19 | Qatari | 0 | | | | |
| Saudi A. | 1,692 | Saudi A. | 64 | | | | |
| Syrian | 109,510 | Syrian | 36,512 | | | | |
| Tunisian | 511 | Tunisian | 210 | | | | |
| UAE | 126 | UAE | 0 | | | | |
| Yemeni | 11,343 | Yemeni | 839 | | | | |
| Total | 1,004,858 | | 180,158 | | 553,823 | | 149,962 |

## The Arab Case

### Identification and Size

Table 1 provides the frequency distribution for the combined first and second ancestry responses in the 2000 census. Similar to figures published by the U.S. Census Bureau, the combined 6 % file yields 1.17 million persons who reported at least one Arab ancestry in 2000 (U.S. Bureau of the Census 2003a). The number is slightly different from the official U.S. Census count of 1.19 million because I am working with the combined 6 % PUMS rather than the full long-form data file. As seen in the table, slightly more than 1 million persons claimed Arab ancestry as their first ancestry, and 180,000 listed an Arab response as their second ancestry. There is some overlap in these categories, which is illustrated in Fig. 1. Of the total 1.17 million persons reporting Arab ancestry, 84.6 % reported it as their first ancestry

**Table 2** Sociodemographic differences between Arab identity categories

| | Standard definition (ancestries 1 and 2) | Alternative definition (place of birth/language) | |
|---|---|---|---|
| Race | | | |
| White alone | 81.0 % | 66.7 % | $P < 0.0001$ |
| White and another race | 15.6 % | 15.9 % | $P < 0.1$ |
| Black | 1.4 % | 10.5 % | $P < 0.0001$ |
| Asian | 0.6 % | 2.7 % | $P < 0.0001$ |
| Hawaii/PI/Native Am | 0.1 % | 0.5 % | $P < 0.0001$ |
| Other race alone | 1.0 % | 3.1 % | $P < 0.0001$ |
| All other combinations | 0.4 % | 0.7 % | $P < 0.01$ |
| Educational attainment[a] | | | |
| High school graduate or higher | 86.2 % | 70.5 % | $P < 0.0001$ |
| Bachelor's degree or higher | 41.8 % | 26.5 % | $P < 0.0001$ |
| Graduate degree or higher | 17.2 % | 10.3 % | $P < 0.0001$ |
| Labor force status[b] | | | |
| In civilian labor force | 64.9 % | 55.8 % | $P < 0.0001$ |
| Not in labor force | 34.9 % | 43.9 % | $P < 0.0001$ |
| Mean hours worked | 1,923.6 | 1,794.5 | $P < 0.0001$ |
| Poverty rate | | | |
| All Persons (in household) | 13.3 % | 20.3 % | $P < 0.0001$ |
| Age and sex | | | |
| Male | 54.3 % | 55.6 % | $P < 0.05$ |
| Mean age | 31.2 | 34.3 | $P < 0.0001$ |
| Sample size | 1,172,666 | 152,622 | |

[a] Persons 25 years or older

[b] Persons 16 years or older

only, 14.3 % reported it as their second ancestry only, and 1.1 % listed it as both their first and second ancestry choices.

The primary question is to what extent do alternative methods of identifying the Arab population alter the size and characteristics of this group? Two sources for addressing this question are place of birth and language spoken in the home, and the categories for these alternative definitions are listed in Table 1. It is important to note that there is an overlap in country of birth and ancestry, such that persons born in an Arab country may also list an Arab ancestry—those persons are not counted twice in the analyses. Rather, I focus on those persons who were born in an Arab country but who did not list an Arab ancestry. Figure 1 illustrates the degree of overlap among the possible definitions of Arab identity and decomposes the percentage that each subgroup contributes to the entire population (using the most expansive definition of 1.33 million). Note that the percentages in the figure will not match the percentages in Table 2 because the figure decomposes the percentage that each subgroup contributes to the 1.33 million, while the tables shows the percentage change from 1.17 million (standard definition) when the subgroups are added.

**Table 3** Comparison of Arab identity categories to U.S. population

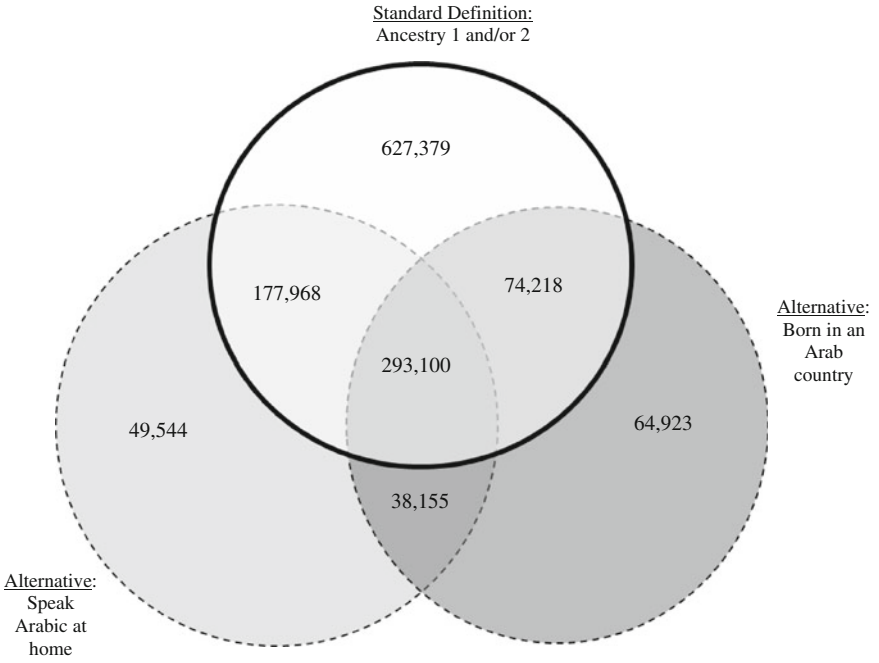
| | Standard definition (ancestries 1 and 2) | Expanded definition (Anc; POB; lang.) | U.S. population |
|---|---|---|---|
| Race | | | |
| White alone/with another race | 96.6 % | 95.0 % | 77.1 % |
| All other | 3.4 % | 5.0 % | 22.9 % |
| Educational attainment[a] | | | |
| High school graduate or higher | 86.2 % | 84.2 % | 84.1 % |
| Bachelor's degree or higher | 41.8 % | 39.8 % | 25.6 % |
| Labor force status[b] | | | |
| Employed (in civilian LF) | 61.6 % | 60.4 % | 59.7 % |
| Unemployed (in civilian LF) | 5.0 % | 5.2 % | 5.8 % |
| Not in labor force | 34.9 % | 36.0 % | 36.1 % |
| Occupation | | | |
| Management, professional, and related occupations | 42.7 % | 41.3 % | 33.6 % |
| All other | 57.3 % | 58.7 % | 66.4 % |
| Poverty rate | | | |
| All persons (in household) | 13.3 % | 14.1 % | 12.4 % |
| Sample size | 1,172,666 | 1,325,288 | 281,421,906 |

[a] Persons 25 years or older

[b] Persons 16 years or older

As seen in the diagram, 22.1 % of the Arab population can be classified as having the strongest Arab identification because they meet all three classification criteria by reporting an Arab ancestry, an Arab place of birth, and speaking Arabic at home. Another 19.0 % report an Arab ancestry in combination with either Arab place of birth or speaking Arabic at home, and a sizeable (47.3 %) group only reports an Arab ancestry. The most interesting subgroups for the purposes of this study are those that did not claim an Arab ancestry but can be identified with other markers. Here, we see that 11.5 % of the 1.33 million do not claim an Arab ancestry but were either born in Arab country (4.9), speak Arabic at home (3.7), or both (2.9 %). Including persons who were born in an Arab country *and* speak Arabic at home would increase the standard definition size of the Arab population by 3.3 %. Adding this group would be the most cautious expansion of the Arab population as it is highly likely that persons who were both born in an Arab country and speak Arabic in the home are of Arab ancestry. The most liberal expansion of the standard definition would be to include the 11.5 % discussed above who did claim an Arab ancestry.

The table beneath Fig. 1 illustrates the percentage change in the size of the population when these definitions are used. Ancestry 1, alone, is a common identifier used by researchers accessing the Public Use Microdata files because it is the easiest marker of Arab identity and requires relatively little data manipulation (Read 2004). But using this category alone would result in a 14 % reduction in the standard census classification of the population (difference between 1.17 and 1.00 million). The second category (ancestries 1 and 2) represents the official census




| | Weighted N | % change from standard definition (Weighted) |
|---|---|---|
| Categories | | |
| Ancestry 1+Ancestry 2 | 1,172,666 | reference |
| Ancestry 1 alone | 1,004,858 | -14.3 % |
| Ancestry 1+Ancestry 2+POB | 1,275,744 | 8.8 % |
| Ancestry 1+Ancestry 2+Arabic language | 1,260,364 | 7.5 % |
| Ancestry 1 +Ancestry 2+POB +language | 1,325,288 | 13.0 % |

**Fig. 1** Size and overlap in Arab identity categories ($n$ = 1,325,288)

categorization of the Arab population and is used by researchers who have more advanced skills working with Census Bureau files. The multiple category responses that follow present various combinations when place of birth and language are considered alone and in tandem. As seen in the table, adding persons born in an Arab country but who did not list an Arab ancestry to the standard definition increases the size of the population by 8.8 % to 1.28 million. Egypt (22.4 %), Lebanon (19.8 %), Iraq (17.9 %), and Jordan (10.2 %) are the largest countries of representation. Adding persons who speak Arabic in the home but who did not mark an Arab ancestry (blank or other) increases the population by 7.5 % to 1.26 million. The most expansive definition as defined by the theoretical framework in this study combines ancestries 1 and 2, Arab place of birth, and Arabic language for a total of 1.33 million persons, or an increase of 13.0 % (152,622) from the standard census definition.

**Table 4** Standard and alternative methods for classifying the Mexican population, census 2000

| Standard method | | | | Alternative methods | | | |
|---|---|---|---|---|---|---|---|
| Hispanic origin | *N* | Ancestry 1 | *N* | Ancestry 2 | *N* | Place of birth | *N* |
| Mexican | 20,881,890 | Mexican | 14,020,115 | Mexican | 418,155 | Mexico | 9,324,341 |
| | | Mexican American | 1,597,451 | Mexican American | 36,949 | | |
| | | Mexicano | 1,829,335 | Mexicano | 3,707 | | |
| | | Chicano | 64,585 | Chicano | 1,610 | | |
| | | Mex Am Indian | 66,075 | Mex Am Indian | 7,305 | | |
| | | Mexican State | 311,111 | Mexican State | 5,001 | | |
| Total | 20,881,890 | | 17,888,672 | | 472,726 | | 9,324,341 |

**Table 5** Sociodemographic differences between Mexican identity categories

| | Standard definition (Hispanic origin) | Alternative definition (place of birth/ancestry) | |
|---|---|---|---|
| Race | | | |
| White alone | 47.3 % | 51.0 % | $P < 0.0001$ |
| White and another race | 4.3 % | 6.0 % | $P < 0.0001$ |
| Black | 0.9 % | 2.3 % | $P < 0.0001$ |
| Asian | 0.4 % | 0.8 % | $P < 0.0001$ |
| Hawaii/PI/Native Am | 1.4 % | 2.1 % | $P < 0.0001$ |
| Other race alone | 45.5 % | 37.5 % | $P < 0.0001$ |
| All other combinations | 0.2 % | 0.4 % | $P < 0.0001$ |
| Educational attainment[a] | | | |
| High school graduate or higher | 45.8 % | 54.6 % | $P < 0.0001$ |
| Bachelor's degree or higher | 7.5 % | 8.5 % | $P < 0.0001$ |
| Graduate degree or higher | 2.4 % | 2.5 % | $P = 0.483$ |
| Labor force status[b] | | | |
| In civilian labor force | 61.8 % | 59.5 % | $P < 0.0001$ |
| Not in labor force | 37.8 % | 40.0 % | $P < 0.0001$ |
| Mean hours worked | 1,721.4 | 1,717.5 | $P = 0.937$ |
| Poverty rate | | | |
| All persons (in household) | 23.2 % | 21.4 % | $P< 0.0001$ |
| Age and sex | | | |
| Male | 52.7 % | 49.7 % | $P < 0.0001$ |
| Mean age | 26.0 % | 25.9 | $P = 0.759$ |
| Sample size | 20,881,890 | 2,040,629 | |

[a] Persons 25 years or older

[b] Persons 16 years or older

**Table 6** Comparison of Mexican identity categories to U.S. population

| | Standard definition (Hispanic origin) | Expanded definition (Origin, anc, POB) | U.S. population |
|---|---|---|---|
| Race | | | |
| White alone/with another race | 51.6 % | 52.1 % | 77.1 % |
| All other | 48.4 % | 47.9 % | 22.9 % |
| Educational attainment[a] | | | |
| High school graduate or higher | 45.8 % | 46.6 % | 84.1 % |
| Bachelor's degree or higher | 7.5 % | 7.6 % | 25.6 % |
| Labor force status[b] | | | |
| Employed (in civilian LF) | 56.1 % | 55.8 % | 59.7 % |
| Unemployed (in civilian LF) | 9.3 % | 9.3 % | 5.8 |
| Not in labor force | 37.8 % | 38.0 % | 36.1 % |
| Occupation | | | |
| Management, professional, and related occupations | 15.0 % | 15.3 % | 33.6 % |
| All other | 85.0 % | 84.7 % | 66.4 % |
| Poverty rate | | | |
| All persons (in household) | 23.2 % | 23.0 % | 12.4 % |
| Sample size | 20,881,890 | 22,922,519 | 281,421,906 |

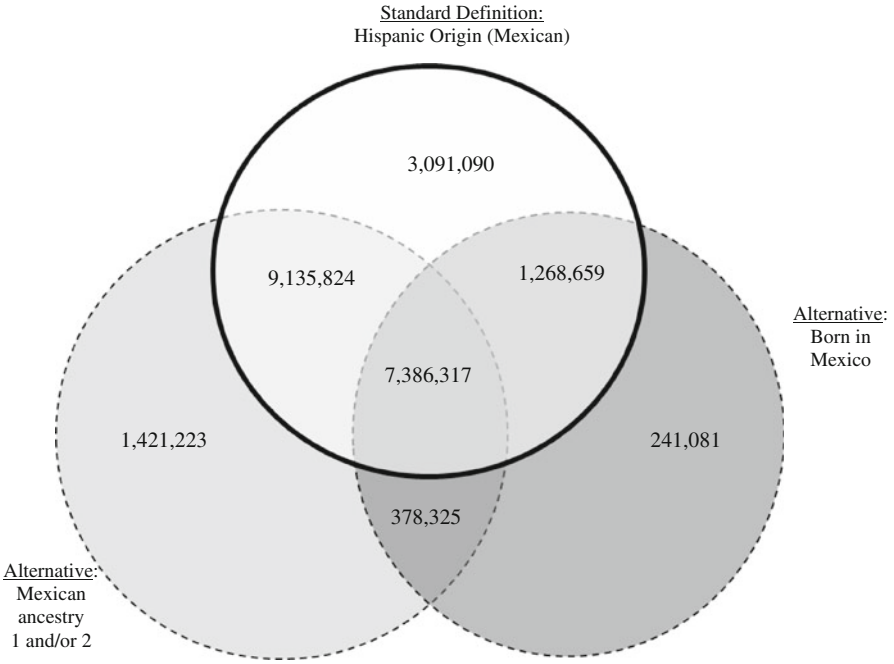
[a] Persons 25 years or older

[b] Persons 16 years or older

What is the composition of this "unmeasured" population of 152,622 persons, hereafter referred to as "alternative definition" group? The plurality (64,923 persons) of this group was born in an Arab country but do not speak Arabic at home, and adding these persons to the standard definition would increase the size of the Arab population by 5.5 %. There are at least two possible explanations for this group: either they are non-Arabs born in an Arab country or they are Arab persons born abroad who immigrated at a young age. The latter explanation seems more plausible than the former, given the relatively low number of non-nationals born in Arab countries in general (U.S. Immigration and Naturalization Services 2003). The second column shows that 49,544 persons speak Arabic at home but were not born in an Arab country, and adding this group to the standard classification would increase the size of the population by 4.2 %. The most likely explanation for this subgroup is that they are second-generation offspring who live in immigrant homes, where the native language is still practiced (Portes and Rumbaut 2001). Unlike the Spanish language, Arabic is not a common language among non-native speakers in the United States. Another possibility is that these are non-Arabs who are married to Arabs and learn to speak Arabic.

## Demographic and Socioeconomic Implications

To this point, we have only looked at changes in the *size* of the Arab population when different definitions of identity are employed. Tables 2 and 3 examine the social and




| | Weighted N | % change from standard definition (Weighted) |
|---|---|---|
| Categories | | |
| Hispanic origin alone (Mexican) | 20,881,890 | N/A |
| Hispanic origin + Ancestry 1 (A1) | 22,472,931 | 7.6% |
| Hispanic origin + Ancestry 2 (A2) | 21,090,430 | 9.9% |
| Hispanic origin + POB (Mexico) | 21,501,296 | 3.0% |
| Hispanic origin + A1 + A2 | 22,681,438 | 8.6% |
| Hispanic origin + A1 + POB | 22,715,880 | 8.8% |
| Hispanic origin + A2 + POB | 21,707,968 | 4.0% |
| Hispanic origin + A1 + A2 + POB | 22,922,519 | 9.8% |

**Fig. 2** Size and overlap in Mexican identity categories ($n = 22{,}922{,}519$)

demographic characteristics of the alternative definition group and assess the extent to which adding this population to the standard definition group alters the overall profile of Arabs in America. Table 2 assesses whether the sociodemographic characteristics of the alternative group are significantly different from those of the standard group (*t* tests). Table 3 examines whether combining the alternative group with the standard group changes the overall profile of the Arab population ("expanded group") and places these alternative identity groups in a broader comparative framework with the total U.S. population.

What is immediately apparent in Table 2 is that the alternative definition group differs significantly from the standard definition group on all characteristics. The alternative definition group is more diverse in terms of racial identification, with one-sixth (17.5 %) identifying with a non-white category (10.5 % identify as "black" and 2.7 % as "Asian"). Compare this to the 96.6 % of the standard definition group who identify as white. Though relatively well educated, the alternative definition group is considerably less likely to have a bachelor's degree or higher compared to the standard group (26.5 % compared to 41.8 %). They are also less likely to be employed than the standard group and more likely to work fewer hours and to be in poverty. In sum, the alternative definition group is less advantaged than the standard definition of the Arab population in terms of socioeconomic characteristics.

Table 3 compares how the addition of the alternative definition group to the standard group changes the overall profile of Arab population. I add nativity and English language ability to this table but exclude it from Table 2 because they are not meaningful when examining the characteristics of a predominantly foreign-born group (i.e., Arab place of birth). T tests are also excluded from this table because the first group is a subset of the second. As seen in the table, the addition of the alternative group has expected effects to the population profile—it decreases the proportion who identify as white; tips the balance of the immigrant composition more toward the foreign-born (decrease from 60.1 % U.S.-born to 55.9 %); decreases the population's education levels, labor force activity, occupational status (e.g., professional/managerial, service), and income; and increases the poverty rate. Most of the changes are small, largely due to differences in the size of the two groups (152,622 compared to 1.17 million). Similarly, the addition of the alternative definition group does little to alter the overall advantaged profile of the Arab population relative to the U.S. population. Arabs have considerably higher levels of educational attainment (39.8 % with a bachelor's degree or higher compared to 25.6 %) and are more likely to occupy professional/managerial positions (41.3 % compared to 33.6 %). However, the question remains: If the size of the alternative population continues to grow, how will it affect the Arab population as a whole? Ancillary analysis of 1990 and 2000 census data not shown here finds that the alternative definition group did indeed grow at a faster pace than the standard definition group over that 10-year period. If the trend continues, policy-makers will need to consider how to best address the needs of a growing, more disadvantaged group of Arabs who may be overlooked in standard classification methods. I will return to address these issues in the conclusion.

## The Mexican Case

### Identification and Size

This section examines how alternative definitions of identity alter the size and characteristics of the Mexican population. Table 4 lists the full range of response categories for Hispanic origin (Mexican), place of birth (Mexico), and ancestry (Mexican, Mexican American, Mexicano, Chicano, La Raza, Mexican American

Indian, Mexican State). As seen in the table, there are 20.9 million persons who identify themselves as "Mexican" in response to the Hispanic origin question, 9.3 million who were born in Mexico, 17.9 million who report a Mexican ancestry as a first response, and 0.5 million who report a Mexican ancestry as a second response. There is an overlap in these categories, as some respondents fall into all four groups and some fall into only one. Figure 2 helps clarify these intersecting identities, showing very little overlap in persons responding with a Mexican identifier on the ancestry questions: 99.9 % of the 17.9 million persons classified as "Mexican" with responses to ancestry 1 did not respond with a Mexican marker to ancestry 2 (either no response or other ancestry). If we limit the analysis to those who are not captured by the standard classification method, we see an interesting relationship between ancestry and place of birth responses. The figure shows that 1.8 million persons provided a Mexican ancestry response on 2000 and 0.6 million persons reported being born in Mexico. But the vast majority of persons that gave ancestry responses (79.0 %) were not born in Mexico, suggesting that the ancestry question is capturing a more assimilated group who consider themselves of Mexican descent.

Figure 2 also demonstrates the degree of overlap in these various definitions of identity and shows the change in size of the population when various definitions are used. The first category in the table (Hispanic origin—Mexican) represents the official categorization of the Mexican population. The second, third, and fourth categories are simulations that show that using alternative definitions in isolation from the standard definition would reduce the size of the population severely: using ancestry 1 alone would decrease the population size by 14.5 %, ancestry 2 alone by 97.8 %, and place of birth alone by 55.6 %. These three categories are largely hypothetical forms of group identification since there is little chance that any of them would be used in isolation to identify persons of Mexican descent.

The multiple category responses that follow present various combinations when Hispanic origin, ancestry, and place of birth are considered alone and in tandem. Figure 2 shows that adding persons who responded with a Mexican ancestry (ancestry 1) to the standard definition would increase the size of the Mexican population by 7.6 %; adding ancestries 1 and 2 would increase it by 8.6 %. Given the large size of the Mexican population, these increments are not trivial, representing roughly a 2 million person increase. The final row shows that adding ancestries 1 and 2, and place of birth to the standard definition would increase the population by 9.8 %.

Figure 2 also decomposes the percentage that each subgroup contributes to the entire population (using the most expanded definition of 22.9 million). One-third (7.4 million or 32.2 %) of the 22.9 million persons fall into the most intensive categorization of the Mexican population—they are Mexican by birth, by ancestry, and by Hispanic origin. This 7.4 million also makes up roughly one-third (35.4 %) of the Hispanic origin-Mexican population (i.e., standard definition). The most cautious expansion of the standard definition group would include that the 378,325 persons were born in Mexico *and* who reported a Mexican ancestry. Adding this group to the standard definition would increase the size of the Mexican population by 1.8 %. Including those who only said they were born in Mexico is probably the most risky estimate because individuals could be born in Mexico but not be of

Mexican heritage (including these persons would increase the population by only 1.2 %). Perhaps the most interesting group is the 1.4 million persons who claimed a Mexican ancestry but did not self-identify as Mexican on the Hispanic origin question, which raises the issue of how respondents perceive these two questions. In combination, the ancestry and place of birth groups (i.e., the unmeasured or alternative definition group) would increase the size of the standard definition of the Mexican population by 9.8 %.

## Demographic and Socioeconomic Implications

To this point, we have only looked at changes in the *size* of the Mexican population when different definitions of identity are employed. This section examines the social and demographic characteristics of this alternative definition group and assesses the extent to which adding this population to the standard definition group alters the overall profile of the Mexican population. The logic of Tables 5 and 6 is similar to that used for the Arab case. Table 5 first assesses whether the sociodemographic characteristics of the alternative group are significantly different from those of the standard group (*t* tests). Table 6 then examines whether combining the alternative group with the standard group changes the overall profile of the Mexican population and compares these alternative identity groups to the total U.S. population.

Table 5 shows that the alternative definition group differs significantly from the standard definition group on most characteristics. The alternative definition group is more likely to self-identify as white alone, 51.0 % compared to 47.3 % of the standard definition group. The alternative definition group is also better educated than the Mexican population identified with the Hispanic origin question: 54.6 % have a high school diploma or higher (compared to 45.8 %), 8.5 % with a bachelor's degree or higher (compared to 7.5 %), and 2.5 % with a graduate degree or higher (compared to 2.4 % but not significantly different). Although the alternative definition group is slightly less likely to be in the labor force (59.5 % compared to 61.8 % of the standard definition group), it is also less likely to be in poverty (21.4 and 23.2 %). Overall, Table 5 indicates that the alternative definition group is generally more advantaged than the standard definition of the Mexican population. It is important to note that this pattern is the opposite of what we found for the Arab case, where the alternative definition group was less advantaged in terms of socioeconomic characteristics relative to the standard definition group.

Table 6 next examines how the addition of the alternative definition group to the standard group changes the profile of the Mexican population. I add nativity and English language ability to this table but exclude it from Table 5 because they are not meaningful when examining the characteristics of a predominantly foreign-born group (i.e., place of birth). I did not run t tests to check for significant differences because the first group is a subset of the second. As seen in the table, the addition of the alternative group has expected effects to the population profile—it increases the proportion who identify as white; tips the balance of the immigrant composition more toward the native-born (increase from 58.5 % U.S.-born to 59.6 %); increases the population's education levels, occupational status, and mean income; and decreases the poverty rate. Again, these patterns are the opposite of those seen in the

Arab case. It is important to note that most of the changes are small, in part due to differences in the size of the two groups (2.0 million compared to 20.8 million).

Finally, Table 6 shows that the addition of the alternative definition group to the standard definition of the Mexican population does little to alter the overall minority profile (i.e., disadvantaged) of this group relative to the U.S. population. Regardless of how the Mexican population is defined, they have much lower levels of educational attainment than the U.S. population (only 7.6 % of the expanded definition group has a bachelor's degree or higher compared to 25.6 %); they are less likely to occupy professional/managerial positions (15.3 % compared to 33.6 %); they have much lower levels of median household income ($33,400 compared to $42,187); and they are much more likely to be in poverty (23.0 % compared to 12.4 %) In sum, using the expanded definition of the Mexican population rather than the original definition does not change the socioeconomic differences between the Mexican population and the total U.S. population. At the very least, future research must consider whether and how the current method for identifying the single largest immigrant population in the United States affects the outcomes in question.

## Summary and Conclusions

The demographic profile of the United States is ever-changing, and as such, we must continue to examine carefully our methods for identifying, enumerating, and characterizing the population. In this vein, this article examined the extent to which using alternative definitions of identity affect the size and characteristics of U.S. ethnic groups, using Mexicans and Arabs as case studies. These two groups provide an ideal opportunity to explore a range of alternative methods for classifying U.S. populations, in addition to the standard methods currently used. For Mexicans, this entailed extending the standard definition (Hispanic origin-Mexican) to include place of birth (Mexico) and ancestry (Mexican, Chicano, etc.). For Arabs, this entailed extending the standard definition (ancestries 1 and 2) to consider place of birth (Arab countries) and language spoken at home (Arabic).

In the Arab case, the results showed that adding persons who were born in an Arab country but did not provide an Arab response to the ancestry question increased the size of the Arab population by 8.8 % and adding persons born in an Arab country and/or who spoke Arabic in the home increased it by 13.0 % (cumulative percent). On average, persons in these alternative definition categories were lesser educated, more likely to be in poverty, and less likely to identify as white than the Arab population as a whole. One plausible explanation for the lack of an Arab ancestry response from these persons is that they did not understand the question, a finding partially confirmed by unpublished qualitative research conducted by the Arab American Institute in its efforts to increase Arab participation in the 2000 census.[2] Other possible explanations are that these persons are non-Arabs married to Arabs (and thus speak Arabic at home) and/or are born in an Arab country but not of Arab ancestry (i.e., reported a different ancestry).

[2] Helen Samhan, Director of the Arab American Institute, personal interview, March 15, 2006.

However, ancillary analyses not shown here find that the vast majority of the alternative definition group reports no ancestry at all, suggesting that they might be of Arab descent.

The results for Mexicans showed that adding persons who responded with a Mexican ancestry but did not respond to the Hispanic origin question increased the size of the Mexican population by 8.6 % and adding persons who were born in Mexico along with ancestry increased it by 9.8 % (cumulative percent). In contrast to the Arab case, persons in these categories (especially the ancestry respondents) were more educated and less likely to be in poverty than the Mexican population as a whole. There are several plausible explanations for the lack of a Hispanic origin-Mexican response among these persons. The most likely is that they may be more assimilated Americans (i.e., second, third, and fourth generation non-immigrants) who affiliate with a Mexican ancestry but do not consider it their primary identity. In her qualitative work among Mexican–Americans in Texas, Dowling (2005) found this to indeed be the case. U.S.-born respondents often rejected the label "Mexican" or only used as it related to their ancestry and culture. In contrast, immigrants and U.S.-born persons who were raised in Mexico were much more likely to self-identify as Mexican (Dowling 2005, p. 58). Relatedly, middle- and upper-class Mexican Americans may be attempting to distinguish themselves from working-class immigrants by rejecting the term "Mexican," which is often used to refer to recent immigrant arrivals (Richardson 1999).

Although the inclusion of the alternative definition groups appeared to have minimal impact on the overall national profile of the Arab and Mexican populations, this largely reflects the relatively small size of the alternative definition groups compared to the larger sizes of the Mexican and Arab populations as a whole. In other words, adding the alternative definition group to the larger population was a small drop in a larger pond. However, this should not downplay the possible future impact of the alternative definition groups on the profiles of the larger ones. Specifically, if different operational definitions of ethnicity result in different socioeconomic and racial profiles of populations, then research and policy must pay closer attention to current enumeration strategies as they may be under-counting the most disadvantaged groups in some cases (e.g., Arab) and over-counting them in others (e.g., Mexican).

Importantly, if the alternative definition groups grow at a faster pace than the standard definition groups, their impact on the demographic profile of the overall population will also grow. Evidence on the Arab population suggests that this may very well be the case, as the number of refugees and immigrants from countries such as Iraq and Yemen continue to immigrate at a faster rate than those from more advantaged backgrounds (Brittingham and de la Cruz 2005; Read 2004). For example, roughly three-fourths (77.5 %) of the U.S. Iraqi population is foreign-born and 43 % are non-U.S. citizens, proportions that are far higher than most other Arab ancestry groups such as Lebanese and Syrian Americans, where the vast majority are either U.S.-born or naturalized citizens (Brittingham and de la Cruz 2005). The Iraqi population is also far less socioeconomically advantaged than these other Arab ancestry groups (Read 2004). In addition, recent studies suggest that an increasing number of Arab and Muslim youth feel isolated and marginalized in a post-9/11 era

and reject being labeled as white in favor of more nationalist and ancestral identifications (Ewing 2008).

Evidence on the Mexican case similarly suggests shifting definitions of race and ethnicity that warrant attention. For example, in a recent study on racial identification among Latino immigrants, Frank et al. (2010) found that Mexican immigrants had a higher representation in the white than non-white category and that respondents with more time in the U.S. (i.e., more integrated) were more likely to identify as white than non-white. They conclude that their findings support the possibility that the U.S. racial boundary system is in the process of change (Frank et al. 2010, p. 395). Moreover, Dowling's (2005) qualitative analysis of ethnic labeling practices among persons of Mexican ancestry in Texas finds that foreign-born Mexicans are more likely than the U.S.-born to accept the term "Mexican." In contrast, many U.S.-born Mexicans consider the term "Mexican" synonymous with "immigrant," and thus reject it in order to distance themselves from the negative stereotypes associated with foreign-born migrant workers. Size of the U.S.-born Mexican population will continue to grow, this has serious implications for understanding the composition and profile of persons of Mexican ancestry, U.S-, and foreign-born alike.

Future research will need to continue monitoring these changes and assess their implications for classifying America's ethnic populations. If the current pattern of population growth continues, the implications for the Arab population are that immigrants in more socioeconomically disadvantaged positions may be missed in standard classification methods. The opposite would be true for the Mexican population, where those who are U.S.-born and/or who are in more affluent social positions might be overlooked. This problem is exacerbated by the fact that the census directs respondents into single-ethnic categories, leaving multi-ethnics or those who might affiliate with more than one primary identity largely unaccounted for. In the end, findings from this study reaffirm the fact that on-going debates over racial and ethnic classification schemas are far from being resolved and underscore the complexities that exist in defining U.S. ethnic populations.

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