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Joining, Leaving, and Staying in the American Indian/Alaska Native Race Category between 2000 and 2010

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Abstract

Conceptualizing and operationalizing American Indian populations is challenging. Each census for decades has seen the American Indian population increase substantially more than expected, with indirect and qualitative evidence that this is due to changes in individuals' race responses. We apply uniquely suited (but not nationally representative) linked data from the 2000 and 2010 decennial censuses (N= 3.1 million) and the 2006–2010 American Community Survey (N = 188,131) to address three research questions. First, to what extent do American Indian people have different race responses across data sources? We find considerable race response change, especially among multiple-race and/or Hispanic American Indians. Second, how are people who change responses different from or similar to those who do not? We find three sets of American Indians: those who (1) had the same race and Hispanic responses in 2000 and 2010, (2) moved between single-race and multiple-race American Indian responses, and (3) added or dropped the American Indian response, thus joining or leaving the enumerated American Indian population. People in groups (1) and (2) were relatively likely to report a tribe, live in an American Indian area, report American Indian ancestry, and live in the West. Third, how are people who join a group different from or similar to those who leave it? Multivariate models show general similarity between joiners and leavers in group (1) and in group (2). Population turnover is hidden in crosssectional comparisons; people joining each subpopulation of American Indians are similar in number and characteristics to those who leave it.

Introduction

Most demographers expect a national population to increase only when births and immigrants outnumber deaths and emigrants. This straightforward balancing equation has been challenged by the American Indian² case which highlights another possibility – population growth through changing racial identification.³ While the American Indian

¹This paper is released to inform interested parties of research and to encourage discussion. The views expressed are those of the authors and not necessarily those of the U.S. Census Bureau.

 $^{^{25}}$ Relative risks (exp(β)) that are below 1.0 show a negative relationship. For example, in Table 6 those who were never married were significantly less likely to leave S1 than they were to stay in this subgroup (exp(β)=0.75). Relative risks above 1.0 show the opposite; people who did not report a tribe in either census were more than five times as likely (exp(β)=5.63) to be S1 leavers than to be S1 stayers.

> population grew at a relatively conventional pace from 1890 through 1950 (see Figure 1) a major shift occurred in 1960 when census respondents could first self-identify their race⁴ and there was a 52 per cent net increase in the number of enumerated American Indians (Passel 1976; Thornton 1987). This number has continued to grow remarkably. Hundreds of thousands more American Indians have been counted each census than expected based on births and immigration.⁵ Demographers, as well as qualitative researchers investigating the phenomenon, have concluded that people have been changing their race response to include American Indian.

> The difference between the number of American Indians expected each year and the number enumerated – the "error of closure" – has been followed with interest since the 1970s, but researchers have had very limited data on which to base their studies. Because censuses are cross-sectional, only net population changes could be assessed and compositional change could only be viewed in the aggregate (Glick and Han 2015; Liebler and Ortyl 2014; Perez and Hirschman 2009). "New American Indians" were deduced to include many former whites with relatively high education and/or from areas far from large American Indian populations (Eschbach et al. 1998; Liebler and Ortyl 2014). Qualitative sociologists have talked with some former whites who began (re)identifying as racially American Indian (Fitzgerald 2007; Jacobs 2015; Liebler 2001; Nagel 1996; Sturm 2011). With little available evidence, the characteristics of those who left the American Indian category have not been studied. However, numerous policies and programs encouraged assimilation by people of American Indian descent (e.g., allotment, boarding schools, and out-adoption) and may have discouraged many from reporting this heritage.

> Within this research tradition, we break new ground. We construct a longitudinal data set with information on about 3.1 million people who reported (or were reported as)⁶ American Indian in the race question in Census 2000, the 2010 Census, or both. For those who also participated in the American Community Survey (ACS) in 2006 through 2010 (N = 188,131), we have substantial supplementary data. With linked, longitudinal data about individuals, we move beyond the study of net change to explore the composition of countervailing flows of people into and out of the American Indian response category.

²We use "American Indian" to describe a person who reported "American Indian or Alaska Native" in the race question on the census form. Unless specified, we are referencing the entire group, whether or not other races were also reported and regardless of Hispanic origins. Our study includes those reported as American Indian in the race question in Census 2000 and/or the 2010 Census. We do not assume that they always have or always will report American Indian (or be reported as this). We use the person's time-specific race response to describe him/her. For instance, if someone reported American Indian in 2000 and white in 2010, we refer to him/her as non-American Indian in 2010.

³We use "racial identification" and "race response" to mean the response given on the decennial census form. This is not necessarily the same as a person's racial identity, though they are probably related.

⁴We apply the terms "race" and "Hispanic origin" in congruence with the federal statistical definitions used to collect the data (Office of Management and Budget 1997). On each questionnaire used here, there was one question about Hispanic origin (one response

allowed) and one question about race (multiple responses invited).

5 Population growth from identity change has been evident in other indigenous groups (e.g., Guimond et al. 2014; Kukutai and Didham

⁶Responses might not be self-reports, though we simplify our prose by writing as though they are self-reports. Using case selection, we ensure that these are self-reports or reports by someone else in the household (probably the householder or his/her spouse; Sweet 1994), though enumerators visited some homes and could influence responses.

There were 4.1 million American Indians counted in Census 2000 (Grieco and Cassidy 2001) and 5.2 million in the 2010 Census

⁽Humes et al. 2011). For reasons described below, our linked data are not nationally representative.

Our research questions are threefold. First, to what extent do people change responses to include or exclude American Indian? The answer addresses the common assumption that race responses are stable over time. Second, how are people who change race responses different from or similar to those who do not? They may have varied identities as well as distinct race-related experiences. Third, to what extent are those who join an American Indian subgroup (e.g. non-Hispanic single race American Indian) different from or similar to those who leave it? Differences between joiners and leavers may point to reasons that people change responses. If the groups are similar, joiners and leavers may be two views of a single group with dynamic identity experiences. Programs serving the point-in-time American Indian population can do so if joiners and leavers are similar, despite flux in identification.

We find that a large number of individuals change their race response to include or exclude American Indian, and this is particularly true among those who also report a Hispanic origin and/or another race. We also find that people who change their race response to include/ exclude American Indian differ from those who keep the same response across the two censuses, particularly in terms of their connections to other American Indians measured in terms of whether they reported a tribe or American Indian ancestry, and whether or not they live in American Indian areas. Finally, we find many similarities between joiners and leavers both in terms of numbers and characteristics.

This research is important for both practical and theoretical reasons. We intend to aid analysts, policy makers, and the public in understanding American Indians in 2000 and 2010 (see Lujan 2014). We give disaggregated information about joiners, stayers, leavers, Hispanics, non-Hispanics, single-race responses, and multiple-race responses. Our multivariate analyses provide new evidence of characteristics accompanying each response pattern – evidence relevant to theories about racial identity and the social construction of race (e.g., Wimmer 2008).

American Indians: Exceptions or Forerunners?

In research on identity change and response change, part-American Indians have been shown to shift responses more often than people who report black, Asian, white, and/or Hispanic heritage (Campbell and Troyer 2007; Doyle and Kao 2007; Dusch and Meier 2012; Harris and Sim 2002; Hitlin et al. 2006; Singer and Ennis 2003; U.S. Census Bureau 1993). Are American Indians fundamentally different? In agreement with Snipp (1997), we think not. Instead, we see American Indians as representing the vanguard; other groups may well follow in their path. For example, like American Indians, people in Asian- and Hispanic-American groups are increasingly forming unions across race and ethnic lines (Wang 2012) and as greater numbers of Hispanics and Asians form successive generations in the U.S. (i.e. 4th generation), race and ethnic changes may become more common within these groups. Questions of identity and socially-defined group boundaries are likely to expand for many race/ethnic groups in coming years. How each group is measured will also continue to affect the social construction of race and group boundaries (e.g., Humes and Hogan 2015; Omi and Winant 1994; Prewitt 2013; Snipp 1997). Pacific Islanders and multiple-race respondents from all race groups already show a high level of race response change across the 2000 to 2010 period (Liebler et al. 2014).

At the same time, American Indians are not the same as other race/ethnic groups in the U.S. What it means to be American Indian is complicated by the existence of tribal governments, indigenous homelands, tribal enrollment blood quantum requirements, and political relationships with the federal government. A person deciding whether to mark American Indian as his or her race has extra dimensions to consider – "American Indian" includes sometimes-knotty political and/or legal statuses (and related contested identities) that are not at issue in non-indigenous groups (see Robertson 2013 and U.S. Census Bureau 2008:v).

In this complex milieu, millions of people with American Indian heritage report it to the Census Bureau in an ancestry question but not in the race question (see Figure 1). Over the centuries, many policies and practices have strongly urged American Indian assimilation, fostering an atmosphere of stigma that may still affect some. Also, as Senator Elizabeth Warren's experiences illustrate, part-whites who claim indigenous heritage can be heavily criticized for seeming to try to benefit from minority status (e.g., Seelye 2012). For part-black American Indians, there are twin pressures discouraging an American Indian response: part-blacks are often seen as "just" black (Davis 2005; Khanna and Johnson 2010) and part-American Indians are much less often seen as American Indian (Gullickson and Morning 2011; Snipp 1989, 2003).

The Hispanic American Indian category contains a variety of people, including at least four groups. Some Hispanic American Indians have, for example, one Hispanic parent and one American Indian parent. Some have a mestizo identity and, in an effort to convey this identity on the census form, mark a combination of Hispanic, American Indian, white, and perhaps black. Some South and Central American indigenous people mark the "American Indian or Alaska Native" check box on the race question; most of these people were reported Hispanic. And some South or Central American indigenous people reported their tribe on the form without marking the American Indian check box. These responses were coded as American Indian in post-enumeration processing, in accordance with the federal definition of American Indian (Office of Management and Budget 1997). 12

⁸Nation building projects in Latin America often promoted ideologies about mestizaje or mestizo – racial and cultural mixture or fusion (Kearney 2000; Miller 2004; Telles and Bailey 2013).

⁹Many Latin American countries recently legally recognized indigenous groups (Telles and Bailey 2013). There are about 400

¹⁰Among American Indians whose only reported tribe was from South or Central America, 86 per cent reported Hispanic in Census 2000 and 94 per cent did so in the 2010 Census.
¹¹People who listed a tribe anywhere in the race question were coded as American Indian race in post-enumeration processing. Of

¹²The federal definition of American Indian or Alaska Native is "A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment" (Office of Management and Budget 1997).

⁹Many Latin American countries recently legally recognized indigenous groups (Telles and Bailey 2013). There are about 400 indigenous groups in Latin America and the Caribbean (Montenegro and Stephens 2006) and over 40 million of 500 million Latin Americans identify as indigenous (Telles and Bailey 2013). Many are bound to their indigenous heritage through language and political, social, and cultural ties (Gonzalez 1994; Montenegro and Stephens 2006). Though some live on (often remote) tribal lands or rural areas, an increasing share live in urban areas (Dahl and Jensen 2002; Del Popolo et al. 2007; Roldán Ortiga 2004). As a whole, they are relatively poor with worse social and health outcomes (Kearney 2000; Psacharopoulos and Patrinos 1994).

¹⁰Among American Indians whose only reported tribe was from South or Central America, 86 per cent reported Hispanic in Census

¹¹People who listed a tribe anywhere in the race question were coded as American Indian race in post-enumeration processing. Of 244,761 people reporting a Central or South American tribe in the 2010 Census, only 38 per cent marked the "American Indian or Alaska Native" check box. Of the 3,195,538 who reported a North American tribe, 84 per cent marked the box. Our linked decennial sample has higher proportions who marked the check box – 46 per cent and 98 per cent, respectively.

¹²The federal definition of American Indian or Alaska Native is "A person having origins in any of the original peoples of North and

Prior Research

To what extent do people change responses to include or exclude American Indian?

Do people change their racial identification to/from American Indian? How common is this? Based on the demographic balancing equation, Passel (1976) calculated the expected net increase from 1960 and 1970 to be 202,000, but the 1970 Census count of American Indians was 67,000 higher than this. Passel suggested that part of this error of closure was due to changes in racial identification from white in 1960 to American Indian in 1970. As illustrated in Figure 1, large errors of closure continued to appear in subsequent decades – 366,000 between 1970 and 1980 (Passel and Berman 1986, Passel 1997), 181,000 between 1980 and 1990 (Harris 1994), and just over one million between 1990 and 2000 (Liebler and Ortyl 2014). These studies and others (Eschbach 1993, 1995; Eschbach et al. 1998; Harris 1994) point to changes in racial classification as a primary factor causing these errors of closure.

Researchers using smaller longitudinal data sets have found lower rates of race response consistency among people giving American Indian responses compared to those reporting white, black, or an Asian group (Dusch and Meier 2012; Singer and Ennis 2003; U.S. Census Bureau 1993). For example, two-fifths of 1990 Census American Indians reported a different race in the post-Census reinterview (U.S. Census Bureau 1993). Over one-quarter of non-Hispanic American Indians and over three-quarters of Hispanic American Indians gave a different race/Hispanic response between Census 2000 and the 2000 Current Population Study (del Pinal and Schmidley 2005). One-third of single-race American Indian youth in 1994/5 reported a different race 6 to 8 years later (Doyle and Kao 2007).

Most prior researchers could not study multiple-race responses and did not disaggregate by Hispanic origin (Eschbach et al. 1998; Harris 1994; Passel 1976, 1997; Passel and Berman 1986). Liebler and Ortyl (2014) are the exception. Using cross-sections of the 1990 and 2000 censuses, they deduced that many newly identified Hispanic American Indians were relatively young. They also demonstrated that some 1990 single-race American Indians must have reported multiple races in 2000.

Not all racial re-classification is due to identity changes. Response change can also be a result of a different person within the household filling out the form, individuals making a mistake when filling out their form, individuals purposely misreporting their race, or an outsider replying for a non-responsive household (Compton et al. 2012; Porter et al. 2015; Rockquemore and Brunsma 2002). Most of these issues could affect all groups, so the particularly high level of response change among American Indians is probably not entirely driven by these factors.

Other measurement issues may disproportionately affect American Indians because of the particularly complex set of forces (described above) that construct who is socially seen as American Indian. A survey instrument may not be fully able to capture complex racial identity experiences. Relatedly, a survey response category that draws responses from a heterogeneous set of people may not fully reflect the identities of those who list it as their identification, potentially resulting in response fluidity.

How are people who change responses different from or similar to those who do not?

What are the characteristics of people who change their race response to/from American Indian? Are they different from those who are consistent in identification? How? Prior quantitative and qualitative researchers (e.g., Eschbach et al. 1998; Sturm 2011) have provided a few answers to these questions.

Consistent responses—Though known to be mutable, racial identity is generally thought to be central to self-conception. A consistent race and Hispanic origin response (whatever the details)¹³ may indicate a relatively strong attachment to the group. A person who gives the same race and Hispanic responses in 2000 and 2010 - a "stayer" in our study - may have a relatively strong sense of American Indian identity, and may experience the social world accordingly. Indigenous connections to traditional or legal homelands (Liebler 2010b) and "thick ties" to race groups (Cornell and Hartmann 2007) suggest that stayers might more often report a tribal affiliation, live in an American Indian area, and report American Indian ancestry.

Changing responses—We elaborate on three possibilities below.

New personal circumstances: People who change their response may have experienced changes in circumstance that influenced self-conception or others' perception of them (Cooley 1902). Given the impact of local area characteristics on race responses (Eschbach 1993; Kana'iaupuni and Liebler 2005; Liebler 2010b; Xie and Goyette 1997), we anticipate that residential mobility spurs response instability, especially if the residential locations have different racial compositions or culturally-relevant meanings. Children in 2000 who moved out of their parents' homes by 2010 may report a different race for themselves than was previously recorded. Other life changes could also potentially affect race responses, including marriage, divorce, discrimination experiences, or new information about family heritage.

Terminology: People who do not read English well or who are less educated may find the census questions and federal definitions challenging or confusing, potentially resulting in response change from one census to the other. Non-citizens ¹⁴ and new immigrants may be unsure of the social meaning of each race group in the U.S. context and have shifting understandings as they spend more time in the U.S. Some people – such as newly immigrated indigenous Central and South Americans - might face more than one of these barriers.

Variation in source of information: Observed response changes could also reflect a difference in opinion about what race(s) best describe a person (Song 2003). Enumerators are common in American Indian areas (Bates 2008), and the mail-out form is usually filled out by one member of the household for everyone in the household (Sweet 1994). The

¹³The decision of whether to give a single-race response or to report multiple races is based on heritage and also on political and legal considerations, community connections, and other factors (see Liebler 2001; Robertson 2013). ¹⁴Foreign-born individuals who have gone through the citizenship process have had considerable experience with the U.S. system and

may have substantial understanding of U.S. social practices.

multiple facets of race (e.g., observed versus self-identified race) do not necessarily align (Harris and Sim 2002; Porter et al. 2015) and so variation in the source of the information about a person's race(s) may cause variation in the content of that information.

How are joiners different from or similar to leavers?

Our third research task is to understand differences and similarities between those who join and those who leave American Indian subgroups.

Differences—People who join a subgroup might be distinct from those who leave the same subgroup. For example, people who reported single-race American Indian in 2010 but not 2000 might have newly heightened American Indian identity because they recently moved to a densely American Indian area or recently married an American Indian (Eschbach 1993; Kana'iaupuni and Liebler 2005; Lieberson and Waters 1993; Loveman and Muniz 2007). A different change in local or family context could suppress an American Indian race response.

Similarities—Joiners and leavers might be similar if there are certain types of people who are likely to change race responses.

Identity flexibility and white privilege: Many whites in the United States experience their European ethnicities as relatively symbolic or optional, ¹⁵ causing cross-time fluctuations in the number reporting each European ancestry group (Gans 1979; Hout and Goldstein 1994; Lieberson and Waters 1993; Waters 1990). After centuries of mixing, many people who identify and live as white have American Indian ancestors (Liebler 2010a; Snipp 1989; Waters 1990). If some of these people turn a symbolic or optional ethnicity lens to their non-European ancestors they may decide to mark American Indian race (at least for a time). Eschbach et al. (1998) and Liebler and Ortyl (2014) found that the "new" American Indians in previous censuses have an education profile similar to that of whites.

Self-conception mismatched with questionnaire: Translating complex identities into answers to fixed-choice questions can be a challenge. If a person changes her opinion about the best way to convey her self-conception on a census form, this could cause response change. For example, the Census Bureau does not require tribal enrollment in order to be considered American Indian, but other federal agencies (e.g., the Indian Health Service) do require enrollment. A non-enrolled but self-identified American Indian might assume that she does not qualify as American Indian on the census but later learn that she does fit the census definition and so change her response. Also, someone with a mestizo identity might be unsure of whether to mark white, American Indian, and Hispanic, or to mark Hispanic and Some Other Race (or another combination of responses), and might change her opinion on this issue over time.

<u>Multiple salient heritages:</u> Prior research about people with more than one salient racial heritage shows that many have dynamic racial identities and relatively non-stable patterns of

 $^{^{15}}$ Relatedly, socioeconomic privilege could make a race response change from white to minority seem especially costless because the person is buffered from the harshest costs of color.

> race response (e.g., Harris and Sim 2002; Rockquemore and Brunsma 2002, 2008; Root 1996). This may be especially true of people whose parents are of different races if they have relatively extensive experience with the race groups represented by their parents. Consistent with this, we expect some people to have fluid race reports that reflect fluid identities.

Data, Case Selection, Methods, and Measures

Linked data: The U.S. Census Bureau's Center for Administrative Records Research and Applications (CARRA) created the restricted-access data set we used for this study. CARRA used probabilistic record linkage techniques (Fellegi and Sunter 1969) and personal information (name, gender, date of birth, and address; see Wagner and Layne 2014) to strictly assign¹⁶ a unique identifier (a "Protected Identification Key" or PIK) to data sources including the census and ACS. 17 The data were anonymized and can be used only for statistical and research purposes. We used the PIKs to link individuals' census and ACS records into a longitudinal data set. Linking people in Census 2000 to their own responses in the 2010 Census gave a data set with about 200 million people.

Our linked data does not include all people. Some people do not receive a unique PIK (e.g., if their personal information was incomplete or not unique). PIK assignment rates are lower for Hispanics and non-whites than for non-Hispanic whites (Bond et al. 2014). A person counted in 2000 who died or left the country by 2010 could not be in these data, nor could someone who was not yet born or did not live in the U.S. in 2000. A person who was present but not enumerated in one of the censuses (Lujan 2014; Mule 2012; U.S. Census Bureau 2003) would also be left out.

Case selection: To select cases for this study from the linked decennial census data, we began with all people whose race response included American Indian in Census 2000 and/or the 2010 Census – this was 4,140,582 people. We made a series of exclusions (described in Table 1) to further reduce the chances of false links and constrain the extent of response changes due to enumeration issues. After case selection, our linked decennial data include 3,059,818 people whose race report included American Indian in Census 2000 and/or the 2010 Census. The information we have about these 3.1 million people is limited to the few questions that were on the decennial census short questionnaires. We supplement this information by including ACS responses for 188,131 people (after case selection) who participated in the ACS between 2006 and 2010.

Representativeness: The people in our study are all of the people in the linked data who fit the case selection criteria. Results are not weighted estimates and our data are not nationally representative. ¹⁸ Compared to the full census counts of American Indians in 2000 and 2010 (shown in Appendix A), people in our decennial linked data were more often non-Hispanic, female, reported a tribe, and/or lived in an American Indian area (as defined in Table 2).

¹⁶An estimated 1 per cent of links were to the wrong person (Layne et al. 2014).

¹⁷The decennial data has not been through data perturbation. We ensure disclosure avoidance using disclosure review. The ACS data has undergone data perturbation, causing some response mismatch between the decennial and ACS data points.

18 We do not use ACS weights. They account for such things as survey non-response and sampling strategies, but they do not adjust

for record linkage and case selection so they would not make the data representative.

Because Hispanics have a relatively low response rate to the race question (Rios et al. 2014), they were disproportionately excluded. Women have slightly higher response rates than men (Rastogi et al. 2014), a difference which is magnified when data sources are linked. Using address when assigning a PIK favors people who move less often, thus reducing the PIK rates for men ages 20 to 50 (Rastogi and O'Hara 2012).

Methods: To improve knowledge and to coincide with common methods of operationalizing "American Indian," we divide people into four subgroups for analysis: (S1) non-Hispanic single-race American Indian, (S2) non-Hispanic multiple-race American Indian, (S3) Hispanic single-race American Indian, and (S4) Hispanic multiple-race American Indian. Subgroups describe a response at a point in time. A person could be in S1 in 2000 and S2 in 2010, for example, or could be in none of the subgroups in 2000 or in 2010 (e.g., by reporting single-race white).

We use logistic and multinomial logistic regression models to address our second and third research questions, which focus on differences between joiners, stayers, and leavers. Dependent variables for all models reflect race and Hispanic responses in the censuses of 2000 and 2010 only. We explain the dependent variable for each model when introducing the results of the model. So that we can include measures of education, marital status, and labor force participation, we include only people ages 25 and older in the multivariate models. Descriptive statistics include people of all ages (except as noted).

<u>Measures:</u> We include measures of individuals' demographic, socioeconomic, and geographic characteristics as independent variables in our analysis. See Table 2 for details about coding.

Results

To what extent do people change responses to include or exclude American Indian?

Race responses are not necessarily stable across a person's lifetime – a high proportion of people in our data changed their racial identification to/from American Indian over the 2000 to 2010 period, as shown in the off-diagonal cells in Table 3. Less than one-third of ever-American Indian people in the data had the same race/Hispanic response in 2000 and 2010. The remainder changed their race and/or Hispanic response across the decade. In other words, though their responses may reflect their identity at the time, it is not safe to assume that the race and Hispanic origin responses of people in our study will be the same from one census to another. Response change might affect any point-in-time measure of race; this has been shown to affect multiple race responses, Pacific Islander responses, and race responses of those who report Hispanic origins (del Pinal and Schmidley 2005; Harris and Sim 2002; Liebler et al. 2014).

Four response change patterns in Table 3 stand out. First, a large proportion of people in our data (45 percent) moved between a single-race response and a multiple-race response. This

¹⁹Alternate versions of all multivariate models with fewer independent variables but including people of all ages are available on request. Also, descriptive statistics for only people ages 25 and older are available on request.

type of response move is consistent with prior research on identity flux in multiracial people (Harris and Sim 2002; Rockquemore and Brunsma 2008; Root 1996).

Second, some people (20 percent in our data) changed their response from one single-race response to another. This was particularly common among Hispanic American Indians; of those who were consistently identified as Hispanic, 52 per cent changed their race response between American Indian and either white or Some Other Race. Note that most people in our decennial linked data (94 per cent) reported Hispanic/non-Hispanic consistently across censuses.

Third, the number of people joining and leaving each subgroup is similar in size. For example, 1,046,000 people in our data reported non-Hispanic single-race American Indian in 2000. Of these, 158,000 were reported as non-Hispanic single-race white in 2010. They were replaced in the non-Hispanic single-race American Indian category in 2010 by 173,000 people who were reported as non-Hispanic single-race white in 2000. Without longitudinal data, the 15,000-person difference would be the only evidence of these large, countervailing flows.

Fourth, each American Indian subgroup has a low proportion who stayed in the group. Of people in our data who ever report non-Hispanic single-race American Indian, 47 per cent joined or left this group between Census 2000 and the 2010 Census.²⁰ Among Hispanic and/or multiple-race American Indians in our data, over 85 per cent joined or left over the period.²¹ If this pattern holds in other data, the total number of people reported as American Indian at one point in time reflects only a fraction of the number of people ever reported as American Indian.

In a closer look at these 3.1 million people, we disaggregate each subgroup's joiners, leavers, and stayers by age and gender (see Appendix B). Hispanic multiple-race American Indians are a young group and many children moved into or out of this category before their teenage years. Maybe this multifaceted response reflects an early stage of identity development (Erickson 1968) or perhaps a parent reported the child's race in 2000 and the (former) child self-reported in 2010. More broadly, we see that response changes are not the sole experience of a certain age group or gender; a wide variety of people are involved in response change.

To get a third measure of reported race, we next incorporate the race responses given by/for those who also participated in the ACS; see Table 4 and Appendix C. There was some race response change even among people we label "stayers" using census responses. ²² For example, all people in Table 4 rows 1, 4, and 21 (53,495 people) reported single-race American Indian in both censuses, but only those in row 1 (45,869 people) also reported this

 $^{^{20}}$ A total of 1,365,025 people in our decennial linked data reported non-Hispanic single-race American Indian in 2000 or 2010 (=1,045,627 + 1,042,724 - 723,326). Of these 723,326 gave the same report both times. Thus, 723,326/1,365,025 = 53% of people in S1 were stayers. 21 Of people in S2, 13% were stayers. Of people in S4, 9% were stayers.

²²We use the ACS-decennial linked data in Tables 4 through 9. Throughout the paper we define joiners, stayers, and leavers using only information from the decennial censuses of 2000 and 2010. We take into account ACS race responses in our multivariate analyses.

in the ACS.²³ Again we see that a point-in-time measure of race does not necessarily match measures at other points in time; race responses are subject to change.

For each of the 24 possible race response patterns in our 2000-ACS-2010 linked data, we show the proportion who (a) reported Hispanic origins, (b) lived in an American Indian area, (c) reported a tribe, and (d) were children. Hispanic American Indians predominate among those who changed from a single-race American Indian response to a non-American Indian response (rows 9 and 10) or vice versa (rows 15 and 16). Consistently reporting American Indian (including adding or dropping other race responses; rows 1-8) is associated with living in an American Indian area and reporting a tribe.²⁴

How are people who change responses different from or similar to those who do not?

Our second research question asks how stayers (people who gave the same race and Hispanic reports in both censuses) compare to people whose census responses changed. In Table 5 and Appendix D we show characteristics of leavers, stayers, and joiners in each subgroup of American Indians within the ACS-decennial linked data. These tables show, for example, that people who reported multiple-races including American Indian (S2 and S4) tended to have more education than those who ever reported single-race American Indian (S1 and S3).

Prior research on joiners (e.g., Eschbach et al. 1998; Sturm 2011) led us to expect some differences between those who changed responses and those who did not. We find evidence of some differences between stayers and changers. In each subgroup, residential migration was slightly more common among leavers and joiners than stayers. Those who left a subgroup tend to have left an American Indian area and those who joined a subgroup tend to have moved to one. This is consistent with prior research relating homelands and indigenous identities (Eschbach 1995; Kana'iaupuni and Liebler 2005; Liebler 2010b; Memmott and Long 2002).

Hispanic and non-Hispanic American Indians show differences in terms of English language proficiency, education level, and citizenship status. Hispanic American Indians with low English proficiency often change responses, but the few non-Hispanic American Indians who are not proficient in English are more often S1 stayers. Similarly, in the Hispanic American Indian subgroups (S3 and S4) low education is associated with response change, while in the non-Hispanic S1 group lower education is associated with response stability. In S3 and S4, Hispanic foreign-born non-citizens often had different responses from one census to another, but no pattern is evident among the few non-Hispanic non-citizen American Indians. In sum, the four subgroups hold different types of people and should be studied separately when possible.

Besides identifying the response changers, statistics in Table 5 describe characteristics of stayers. When stayers differ from joiners and leavers, cross-sectional numbers give

²³A small proportion of ACS race response changes may be due to data perturbation and not from the respondent.

²⁴People in rows 1-8 and 21-24 (American Indian in both censuses) can have a recorded "enrolled or principal tribe" in 2000 and/or in 2010, while those in rows 9-20 (American Indian in one census) can have a recorded tribe in only one census. Note that we code *any* write-in response as a "tribe report."

inaccurate estimates of stayer characteristics. For example, compared to S1 joiners and leavers, relatively few adults who stayed in S1 were married. Thus a cross-sectional, point-in-time view would show a higher marriage rate for non-Hispanic single-race American Indians in 2010 than was true of those who had this response in both 2000 and 2010.

To learn whether differences between stayers and changers are statistically significant, we apply multivariate models in two ways. First, we use multinomial logistic regression models25 (shown in Table 6) to predict joining or leaving each subgroup, relative to staying in that group. Second, we compare stayers to people making various common response moves. In Table 7 we compare the characteristics of non-Hispanic American Indians who stayed in S1 or S2 to those who made one of three response moves: (a) between single-race and multiple-race American Indian, (b) between single-race American Indian and single-race white, and (c) between multiple-race American Indian and single-race white. We present a similar model about Hispanic American Indians in Table 8, comparing S3 and S4 stayers to those who changed (a) between single-race or multiple-race American Indian and single-race white, and (b) between single-race or multiple-race American Indian and single-race Some Other Race.

In Tables 6, 7, and 8, we see substantial and significant differences between stayers and those who changed responses across the decade. Measures related to nativity and group connections (non-citizen, English skills, race/ancestry reports in the ACS, tribe reported, and living in an American Indian area) are especially able to distinguish stayers from others.

Our independent variables are particularly effective at parsing non-Hispanic American Indian stayers from joiners/leavers, as shown by the relatively high values of r^2 (0.39 for S1 in Table 6, and 0.45 in Table 7). Connections to land and tribe are powerfully predictive of race response patterns among non-Hispanic American Indians, including people who switched between multiple-race and single-race American Indian race responses (but were consistently non-Hispanic). They were relatively likely to report a tribe, report American Indian ancestry, and/or live in an American Indian area as compared to people who left the American Indian group entirely and also compared to S2 stayers.

Measured characteristics are somewhat less effective at distinguishing Hispanic American Indian joiner/leavers from stayers (as seen in the r^2 values in Table 8 and also models about S3 and S4 in Table 6). Hispanic American Indian stayers (S3 and S4 in Table 8) were much more likely to report American Indian ancestry, report a tribe, or live in an American Indian area than those who changed responses to/from Hispanic single-race white or Hispanic single-race Some Other Race.

In sum, we found that people in our data who changed their race response between 2000 and 2010 were significantly and substantively different than those who did not. Changers who gave a non-American Indian response in 2000 or 2010 (single-race white or Some Other Race) were also notably different from those who consistently reported American Indian (either as stayers or by moving between single- and multiple-race American Indian responses). Like non-Hispanic stayers (S1 and S2), people who moved between non-Hispanic multiple-race and single-race American Indian (moved between S1 and S2) were

more likely to report a tribe, live in an American Indian area, and report American Indian ancestry than were people who changed to/from non-Hispanic white. They seem to have "thicker ties" to American Indians (Cornell and Hartman 2007) than those who left the American Indian group entirely.

How are joiners different from or similar to leavers?

People who joined a particular subgroup of American Indians over the decade may have had different experiences than those who left the same subgroup. In prior research on joiners (e.g., Liebler 2001; Sturm 2011), some joiners have spoken of an identity awakening spurred by relocation or new family history information. Prior researchers have not been able to study leavers.

Joiners and leavers have appeared very similar to each other in Tables 5 and 6. To explore this more deeply, we next show disaggregations of each group of response changers – for example, we show those moving between S2 and S1 separately from those in S2 who changed to/from non-Hispanic white – and we present descriptive statistics about each group in Appendixes E through H. In Table 9 we show 12 logistic regression models predicting joining a subgroup rather than leaving it (stayers are excluded).

Models in Table 9 show that joiners were significantly different from leavers in some ways in all groups, with cross-group variation in the specifics of these differences. At the same time, we see very poor model fit for all 12 models in Table 9; r^2 ranges from 0.02 to 0.07. This means that within a particular response pattern, those who move in one direction (e.g., from S3 to Hispanic single-race white) are very similar to those who move in the opposite direction (e.g., from Hispanic single-race white to S3), at least with respect to the characteristics measured here. This model fit is especially poor in comparison to our other analyses using these same variables to distinguish between other types of response change.

Similarities between joiners and leavers could indicate that the census snapshots caught them at different points in a generally dynamic experience. Prior research outlined above suggests that joiners and leavers who otherwise report non-Hispanic white would be similar to one another. Qualitative researchers have found people with fluid identities give multiple-race responses sometimes and single-race responses at other times (Rockquemore and Brunsma 2008; Root 1996). Based on our models' inability to distinguish joiners from leavers, we conclude that these scenarios are plausible and bear further study.

Discussion and Conclusion

Researchers have known for decades that the American Indian population grows not only through births, deaths, and migration, but also through changes in how people report their race on the census form (e.g., Passel 1976, 1997; Liebler and Ortyl 2014). Until now, it has not been possible to learn characteristics of those who joined the population, whether anyone left the population by changing race responses, and/or the level of response stability. Our research has closed these gaps. We used high-quality, large-scale linked data to study race and Hispanic response changes among people who reported American Indian in Census 2000, the 2010 Census, or both. We addressed three questions. To what extent do people join

or leave subgroups of American Indians? How are joiners and leavers different from or similar to stayers? And how are joiners different from or similar to leavers?

We found substantial race response change by people in our data. Almost half of the non-Hispanic single-race American Indians in 2000 left this subgroup and were replaced by others by 2010. A much higher fraction of Hispanic and multiple-race American Indians left and were replaced; in these groups, response change is vastly more common than response stability. Similarly high levels of response change have been found among other multiple-race groups and among Pacific Islanders (Liebler et al. 2014).

People in our data who changed race responses (joiners and leavers) had different characteristics than those who kept the same response across two measures a decade apart (stayers). Stayers were generally distinct from response changers in terms of measured connections to other American Indians including tribe response, ancestry response, and living in an American Indian area (some changers also have these attributes). This suggests that stayers have had different race-related life experiences than those who changed responses.

By further disaggregating joiners and leavers into subgroups, we revealed multiple dynamic processes involving racial fluidity. For example, those who changed between a single-race white response and an American Indian response had a different demographic profile than those who moved between multiple-race and single-race American Indian responses. Our results support the decision to separate investigations of formerly-white American Indians (e.g., Fitzgerald (2007) and Sturm (2011)) from studies of people who consistently report American Indian but sometimes report an additional race or races (e.g., Liebler 2001).

We found substantial similarities in the number and characteristics of people who made a particular response move (e.g., from Hispanic single-race American Indian to Hispanic single-race white) and others who made the inverse move. We used multivariate models to distinguish characteristics of people in inverse groups. The models have very poor fit, perhaps indicating that joiners and leavers are engaged in similar identity processes and simply are captured in our data at different points in the process. This complicates the search for reasons that people change race responses; social movements like Red Power (Nagel 1996), for example, are thought to cause mostly unidirectional response change (i.e., joining) and so cannot give a complete explanation of our findings. Programs serving American Indians may not notice this large-scale churning of individuals into and out of the populations they serve because of similarities between those who join and those who leave the population of self-defined American Indians.

Our research has important caveats and limitations. First, response changes do not necessarily mean identity changes. Some are due to false links, differences in post-enumeration processing across the two censuses, differences in opinion about what would be a "correct" response, or mistakenly marking the wrong box(es) when filling out the form. Second, we are not able to study those with an American Indian identity that was not reported in the census race question. Third, our results over-represent response stability in two ways: (a) due to case selection and limitations of linked data, our data include relatively

many non-Hispanics, tribe reporters, and people in American Indian areas – characteristics shared by people with stable responses – and (b) we focus on only two measures of a person's race over an entire decade even though further response changes are possible (and evident in the ACS data).

Our results have theoretical, practical, and policy-related implications. We contribute to conceptual understandings of racial identity and racial fluidity by identifying characteristics of three groups of American Indians who seem to have distinct identity and response fluidity experiences. These are: (I) Stayers: People who keep the same American Indian race/ Hispanic response. (II) Joiners/leavers who stay in the American Indian category: People who sometimes report single-race American Indian and other times report multiple-race American Indian. People in groups (I) and (II) show substantial cultural connections to American Indians – many live in an American Indian area and/or report a tribe. And (III) Joiners/leavers who enter/exit the American Indian category: People who add or drop the American Indian race response entirely. Further research is necessary to understand whether the joiners and leavers in groups (II) and (III) are captured at different points in a common identity experience; this would explain why their characteristics are so similar.

Our results show diversity within the "American Indian" population. Many American Indians already know of this diversity and our work provides important validation and documentation. Our work can also help researchers, policy makers, and tribal leaders more effectively interpret census data about American Indians. For example, because we find similarities between people who consistently report non-Hispanic American Indian (even if they add/drop other race responses), researchers should consider including multiple-race American Indians in their analyses. Grouping multiple-race American Indians instead with other multiple-race respondents (e.g., black-whites) may result in unnecessarily separating similar individuals (single-race and multiple-race non-Hispanic American Indians) into two groups. More generally, researchers should also be careful when making claims about American Indians as a whole, given the diversity that exists within this group.

The American Indian case may show the future of race responses change for people of many race and ethnic groups (Liebler et al. 2014). We expect response change to increase for all groups as more unions are formed across racial and ethnic boundaries and as greater proportions of other groups (e.g., Hispanics and Asians) become grandchildren and great grandchildren of immigrants. In these situations, there may be more conversations and social processes defining what makes a person a "real" Hispanic or Asian, and response change could follow.

Although efforts to improve race and ethnicity questions continue (see Compton et al. 2012; Humes and Hogan 2015; Prewitt 2013), these are complex and personal social constructs and it is possible that no point-in-time measure of race or ethnicity will be able to meet the goal of "categoriz[ing] individuals into the same groups over a long period of time" (Humes and Hogan 2009:112). Researchers designing questions to measure race and ethnicity should consider the possibility of response change, and multiple measures of race should be incorporated into data collection and analysis whenever possible. Analysts from all fields would benefit from conceptualizing and operationalizing a person's race as having a past,

present, and future (as is done for marital status, work, residence, and so on), rather than acting as if race is an unchanging trait. The dynamics of race exposed in this research lend an unfamiliar dimension of complexity to the study of groups such as American Indians, but this should not deter researchers from engaging the issue (see Espey et al. 2014). Rather, with new knowledge about the extent of these dynamics we can employ repurposed strategies and theories to gain more realistic insights into our complex social world.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Appendix A: Comparison of people in our analysis data to those in the full decennial censuses of 2000 and 2010

				AIAN in 2000				AIAN in 2	
		Single-race		Multiple-race Sir		Single-race	gle-race Multi		
Column %	Census 2000 100% data	Analysis data	Census 2000 100% data	Analysis data	2010 Census 100% data	Analysis data	2010 Census 100% data	Analysis d	
Total N	2,475,956	78,202	1,643,345	53,355	2,932,248	77,618	2,288,331	61,	
Hispanic origin									
Non-Hispanic	84%	90%	84%	92%	77%	90%	78%	8	
Hispanic	16%	10%	16%	8%	23%	10%	22%	1	
Gender and age									
Girl/Woman	50%	53%	51%	54%	50%	53%	52%	5	
Boy/Man	50%	47%	49%	46%	50%	47%	48%	4	
Age 0-9*	18%	19%	18%	18%	17%	0%	19%		
Age 10-24	27%	22%	26%	20%	26%	28%	26%	2	
Age 25-39	23%	23%	21%	21%	21%	20%	20%	1	
Age 40-64	26%	32%	28%	35%	30%	40%	28%	3	
Age 65 or older	6%	4%	7%	5%	7%	12%	8%	1	
Connection to AIAN communities									
Reported a tribe	75%	85%	62%	69%	72%	86%	58%	ϵ	
Reported a S./C. Amer. tribe	4%	2%	4%	2%	5%	2%	4%		

				AIAN in 2000				AIAN in 2
		Single-race		Multiple-race		Single-race		Multiple-1
Column %	Census 2000 100% data	Analysis data	Census 2000 100% data	Analysis data	2010 Census 100% data	Analysis data	2010 Census 100% data	Analysis
Did not report a tribe	25%	15%	38%	31%	28%	14%	42%	3
Lived in an AIAN area	44%	53%	13%	17%	42%	55%	11%	1
Did not live in an AIAN area	56%	47%	87%	83%	58%	45%	89%	8
Residence								
In Northeast	7%	5%	13%	11%	7%	5%	13%	1
In Midwest	16%	19%	19%	25%	16%	19%	18%	2
In South	29%	31%	32%	33%	32%	33%	34%	3
In West	48%	45%	35%	31%	46%	44%	34%	3

Data sources: Census 2000 and 2010 Census 100% data are from SF1 and PL files (census.gov). Analysis data are a sub-set of linked cases from Census 2000, the 2010 Census and the 2006-2010 American Community Survey; see text for details.

Appendix Table B: American Indian subgroups by Census 2000 gender and age

Census 2000 Gender and Age	S1: Non-	Hispanic si	ngle-race AIAN	S2: Noi	n-Hispanic ra	multiple- ace AIAN			S4: His	S4: Hispanic multiple-race AIAN		
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
Boys/Men	154,524	333,183	155,609	267,793	83,219	325,280	63,927	15,187	66,326	31,787	8,332	58,039
0-9	29,323	68,562	35,044	47,099	20,690	72,408	15,316	4,119	16,845	9,809	3,613	18,161
10-19	30,530	59,243	26,978	49,325	12,620	56,065	12,276	2,699	12,335	7,238	1,546	11,330
20-29	24,262	48,027	20,991	36,313	8,872	45,407	9,976	2,058	10,648	4,454	868	8,854
30-39	24,386	54,731	25,862	41,259	11,916	53,267	11,287	2,478	11,750	4,178	943	8,682
40-49	23,383	51,089	24,556	44,188	13,615	50,031	8,748	2,260	8,534	3,312	761	6,382
50-59	14,986	32,997	14,479	30,955	9,739	30,235	4,188	1,118	4,118	1,821	440	3,110
60-69	5,835	14,335	5,802	13,739	4,346	12,689	1,589	355	1,513	725	121	1,096
70 +	1,819	4,199	1,897	4,915	1,421	5,178	547	100	583	250	40	424
Girls/Women	167,777	390,143	163,789	297,637	106,666	370,121	67,317	17,344	69,624	35,696	10,120	66,841
0-9	29,264	67,179	33,126	45,705	20,604	72,327	15,354	4,037	16,925	9,731	3,529	18,258
10-19	33,748	65,668	27,834	54,194	14,657	63,203	13,617	3,140	13,457	8,217	1,838	14,019
20-29	25,983	60,252	23,583	39,748	13,571	56,459	10,603	2,820	11,721	5,502	1,464	11,184
30-39	26,416	68,515	29,007	46,091	17,040	62,932	11,350	3,133	11,827	4,824	1,358	10,098
40-49	26,884	64,607	26,692	52,487	18,967	57,492	9,122	2,558	8,750	4,006	1,108	7,592
50-59	16,397	39,315	14,326	36,246	13,555	33,565	4,490	1,133	4,096	2,205	576	3,500

AIAN = American Indian/Alaska Native

A few children were enumerated in 2000 but were reported as less than 10 years old in 2010.

Census 2000 Gender and Age	S1: Non-	Hispanic si	ngle-race AIAN	S2: Nor	n-Hispanic ra	multiple- ace AIAN	S3: Hispanic single-race AIAN		S4: His	: Hispanic multiple-race AIAN		
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
60-69	6,419	17,895	6,139	15,844	5,869	15,603	1,871	373	1,889	842	196	1,502
70 +	2,666	6,712	3,082	7,322	2,403	8,540	910	150	959	369	51	688

Sources: Census 2000 and 2010 Census.

Note: AIAN = American Indian/Alaska Native.

Appendix Table C: Race responses in Census 2000, the ACS, and the 2010 Census

					Characterist	ics in Cens	us 2000 aı	nd/or 2010 (Census	
Race response in		Hie	panic ori	oin .		rican Indian			report	Age in
•				giii			arca		тероп	
2000 ACS 2010	N	yes	one	ou	yes	one	no	at least once	ou	0-17
Consistent responses										
1)	45,869	1,045	1,175	43,649	29,836	5,855	10,178	45,319	550	14,477
2) + + +	8,308	507	213	7,588	1,221	938	6,149	7,505	803	2,720
AIAN and AIAN+ resp	oonses only									
3) +	3,177	195	142	2,840	1,236	558	1,383	3,079	98	1,219
4) + +	4,239	177	136	3,926	1,863	579	1,797	4,151	88	1,545
5) +	3,488	148	85	3,255	1,306	534	1,648	3,399	89	1,234
6) + +	3,358	159	82	3,117	935	495	1,928	3,225	133	1,195
7) + +	1,513	112	46	1,355	463	219	831	1,447	66	579
8) + +	2,034	89	40	1,905	646	261	1,127	1,939	95	765
Left en <u>umerated AIA</u> N	N population									
9)	1,860	316	116	1,428	353	287	1,220	1,446	414	528
10)	13,191	4,224	551	8,416	778	1,257	11,156	7,589	5,602	4,003
11) + +	4,377	240	116	4,021	358	359	3,660	3,143	1,234	1,280
12) +	27,506	1,876	845	24,785	1,257	2,170	24,079	16,806	10,700	7,638
13) +	1,486	100	57	1,329	267	189	1,030	1,184	302	458
14) +	762	65	29	668	121	107	534	587	175	252
Joined enumerated Al	'AN populatio	n								
15)	4,757	741	274	3,742	979	750	3,028	3,809	948	1,592
16)	10,332	3,820	467	6,045	618	928	8,786	5,562	4,770	3,496
17) + +	10,238	478	358	9,402	740	978	8,520	7,337	2,901	3,427
18) +	27,179	2,904	1,018	23,257	1,235	2,376	23,568	15,137	12,042	8,879
19) +	1,681	238	76	1,367	301	203	1,177	1,277	404	586
20) +	2,387	200	88	2,099	461	293	1,633	1,913	474	835
Non-AIAN race repor	ted in ACS on	ly								
21)	3,387	458	159	2,770	835	462	2,090	3,091	296	1,032
22) + +	4,242	378	117	3,747	419	385	3,438	3,603	639	1,330
23) +	1,635	227	65	1,343	287	213	1,135	1,486	149	554
24) +	1,125	85	32	1,008	213	149	763	1,041	84	376

⁼ American Indian/Alaska Native alone

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = American Indian/Alaska Native. Data include people who responded to the 2000 and 2010 censuses and an ACS in 2006-2010. Hispanic responses and response changes are not taken into account in this table.

^{+ =} American Indian/Alaska Native in combination with another race(s)

⁼ Any other race(s)

Appendix Table D: Characteristics of American Indians, by response stability, for four sub-populations

Characteristic in the ACS (unless noted)	S1: Non-	Hispanic sing AIAN	le-race	S2: Non-H	ispanic multi AIAN	ple-race
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
Gender and age						
Girl/Woman	10,391	26,871	9,852	19,177	7,134	21,995
Boy/Man	9,531	23,474	9,368	16,968	5,556	19,769
Age 0-9	626	1,538	765	1,033	465	1,470
Age 10-24	5,262	13,269	5,433	8,411	3,239	11,220
Age 25-39	4,489	9,983	3,655	6,895	2,071	8,347
Age 40-64	7,606	20,023	7,516	15,172	5,255	16,227
Age 65 or older	1,939	5,532	1,851	4,634	1,660	4,500
Citizenship and English language ability						
U.S. born and/or citizen of the U.S.	19,797	50,221	19,140	35,909	12,651	41,596
Foreign-born non-citizen	125	124	80	236	39	168
Speaks English 'very well' or only	19,693	47,414	19,001	35,530	12,578	41,260
Speaks English less than 'very well'	229	2,931	219	615	112	504
Poverty (range 0-999)						
Mean income as a per cent of poverty line	326%	274%	333%	347%	349%	332%
Education (ages 25+ only)						
Less than high school	2,021	6,591	1,829	3,242	817	3,682
High school or GED	4,208	11,860	4,068	7,683	2,352	8,032
Some college	5,061	12,381	4,667	9,872	3,460	10,883
Bachelor's degree	1,749	3,115	1,675	3,695	1,368	4,025
Graduate or professional degree	995	1,591	783	2,209	989	2,452
Labor force (ages 25+ only)						
In the labor force, employed	8,409	20,290	7,899	15,765	5,148	17,144
In the labor force, not employed	758	2,383	667	1,337	485	1,594
Not in the labor force	4,867	12,865	4,456	9,599	3,353	10,336
Marital status (ages 25+ only)						
Currently married	8,688	20,217	8,261	16,409	5,264	16,726
Widowed, separated or divorced	3,419	8,333	3,094	6,494	2,391	7,880
Never married	1,927	6,988	1,667	3,798	1,331	4,468
Race/Hispanic response in ACS						
Same as stayers in this sub- population	4,664	43,377	7,474	5,973	7,565	12,535
Different from stayers in sub- population	15,258	6,968	11,746	30,172	5,125	29,229
AIAN ancestry						
AIAN ancestry reported at all	11,929	46,208	13,321	15,142	8,026	20,326

Characteristic in the ACS (unless noted)	S1: Non-I	Hispanic single AIAN	-race	S2: Non-Hi	ispanic multi AIAN	ple-race
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
No AIAN ancestry reported	7,993	4,137	5,899	21,003	4,664	21,438
Connection to AIAN communities						
Reported a tribe in at least one census	16,063	49,681	15,544	25,134	11,422	28,519
Did not report a tribe in 2000 or 2010	3,859	664	3,676	11,011	1,268	13,245
S./Central Amer. tribe in 2000 or 2010	154	30	84	218	20	101
Lived in American Indian area both censuse	4,029	31,676	4,395	3,820	2,026	4,546
In Amer. Indian area in 2000 but not 2010	1,887	3,088	793	2,388	633	1,179
In Amer. Indian area in 2010 but not 2000	883	3,369	1,850	971	785	3,255
Not in Amer. Indian area in 2000 or 2010	13,123	12,212	12,182	28,966	9,246	32,784
Residence						
Residential migrant	3,502	4,715	3,026	5,900	1,787	6,931
No indication of residential migration	16,420	45,630	16,194	30,245	10,903	34,833
In Northeast	1,636	1,372	1,378	4,208	1,202	4,928
In Midwest	4,668	9,745	4,155	9,310	3,212	10,438
In South	7,797	14,744	8,771	13,074	3,913	15,435
In West	5,821	24,484	4,916	9,553	4,363	10,963
Total N	19,922	50,345	19,220	36,145	12,690	41,764
Total ages 25+	14,034	35,538	13,022	26,701	8,986	29,074
Characteristic in the ACS (unless noted)	S3: Hi	spanic single-r	ace AIAN	S4: Hispan	ic multiple-r	ace AIAN
	Leave	ers Stayers	Joiners	Leavers	Stayers	Joiners
Gender and age						
Girl/Woman	3,2	76 910	3,284	1,915	553	3,146
Boy/Man	2,9	79 770	3,089	1,608	444	2,734
Age 0-9	2	47 76	283	203	93	320
Age 10-24	1,9	72 536	2,074	1,276	431	2,170
Age 25-39	1,3	74 378	1,533	782	177	1,344
Age 40-64	2,2	78 599	2,119	1,052	254	1,754
Age 65 or older	3	84 91	364	210	42	292
Citizenship and English language ability						
U.S. born and/or citizen of the U.S.	5,5	12 1,613	5,591	3,328	977	5,438
Foreign-born non-citizen	7	43 67	782	195	20	442
Speaks English 'very well' or only	4,8	64 1,531	4,969	3,138	949	5,046
Speaks English less than 'very well' Poverty (range 0-999)	1,3	91 149	1,404	385	48	834
Lovery (range o 777)						

Characteristic in the ACS (unless noted)	S3: Hispan	nic single-r	ace AIAN	S4: Hispani	ic multiple-r	ace AIAN
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
Mean income as a per cent of poverty line	273%	310%	281%	344%	350%	316%
Education (ages 25+ only)						
Less than high school	1,325	205	1,220	357	36	671
High school or GED	1,104	288	1,154	461	90	801
Some college	1,137	409	1,137	711	190	1,165
Bachelor's degree	301	108	340	310	87	481
Graduate or professional degree	169	58	165	205	70	272
Labor force (ages 25+ only)						
In the labor force, employed	2,574	678	2,653	1,381	334	2,247
In the labor force, not employed	267	66	273	110	25	229
Not in the labor force	1,195	324	1,090	553	114	914
Marital status (ages 25+ only)						
Currently married	2,434	635	2,446	1,191	275	1,940
Widowed, separated or divorced	883	219	825	418	102	739
Never married	719	214	745	435	96	711
Race/Hispanic response in ACS						
Same as stayers in this sub-population	655	855	1,215	420	476	925
Different from stayers in sub-population	5,600	825	5,158	3,103	521	4,955
AIAN ancestry						
AIAN ancestry reported at all	1,363	1,032	1,661	725	380	1,454
No AIAN ancestry reported	4,892	648	4,712	2,798	617	4,426
Connection to AIAN communities						
Reported a tribe in at least one census	3,357	1,469	3,530	2,101	813	3,342
Did not report a tribe in 2000 or 2010	2,898	211	2,843	1,422	184	2,538
S./Central Amer. tribe in 2000 or 2010	1,312	276	1,359	599	126	1,024
Lived in American Indian area both censuses	433	252	434	113	45	220
In Amer. Indian area in 2000 but not 2010	339	93	127	181	36	100
In Amer. Indian area in 2010 but not 2000	114	122	369	73	55	322
Not in Amer. Indian area in 2000 or 2010	5,369	1,213	5,443	3,156	861	5,238
Residence						
Residential migrant	825	221	931	578	142	988
No indication of residential migration	5,430	1,459	5,442	2,945	855	4,892
In Northeast	571	85	697	403	106	830
In Midwest	627	190	720	470	153	699
In South	1,624	297	1,593	785	146	1,357
In West	3,433	1,108	3,363	1,865	592	2,994
Total N	6,255	1,680	6,373	3,523	997	5,880
Total ages 25+	4,036	1,068	4,016	2,044	473	3,390

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey Continued

Notes: AIAN = American Indian/Alaska Native. Leavers are in the subpopulation in 2000 but not 2010 while joiners are in the subpopulation in 2010 but not 2000. Stayers are in the subpopulation in both censuses. ACS race/ethnicity response is not taken into account in this classification; see Table 2.

Appendix Table E: Characteristics of people who joined, left, and stayed in the non-Hispanic single-race AIAN (S1) group

S1: Non-Hispanic single-race AIAN]	Left to		a.	Joined from .		
Race/Hisp in non-AIAN year	AIAN+	W	Else	Stayers	AIAN+	W	Else
Gender and age							
Girl/Woman	3,975	5,028	1,388	26,871	3,276	5,226	1,350
Boy/Man	3,325	5,043	1,163	23,474	2,892	5,341	1,135
Age 0-9	284	207	135	1,538	254	383	128
Age 10-24	2,107	2,249	906	13,269	1,743	2,851	839
Age 25-39	1,668	2,274	547	9,983	1,124	2,060	471
Age 40-64	2,561	4,269	776	20,023	2,402	4,309	805
Age 65 or older	680	1,072	187	5,532	645	964	242
Citizenship and English language ability							
U.S. born and/or citizen of the U.S.	7,280	10,042	2,475	50,221	6,153	10,544	2,443
Foreign-born non-citizen	20	29	76	124	15	23	42
Speaks English 'very well' or only	7,240	10,021	2,432	47,414	6,111	10,492	2,398
Speaks English less than 'very well'	60	50	119	2,931	57	75	87
Poverty (range 0-999)							
Mean income as a per cent of poverty line	322%	340%	287%	274%	336%	344%	276%
Education (ages 25+ only)							
Less than high school	582	1,153	286	6,591	435	1,061	333
High school or GED	1,412	2,347	449	11,860	1,323	2,284	461
Some college	1,865	2,687	509	12,381	1,565	2,615	487
Bachelor's degree	659	923	167	3,115	558	965	152
Graduate or professional degree	391	505	99	1,591	290	408	85
Labor force (ages 25+ only)							
In the labor force, employed	3,009	4,503	897	20,290	2,539	4,506	854
In the labor force, not employed	224	413	121	2,383	185	376	106
Not in the labor force	1,676	2,699	492	12,865	1,447	2,451	558
Marital status (ages 25+ only)							
Currently married	3,014	4,869	805	20,217	2,723	4,832	706
Widowed, separated or divorced	1,178	1,874	367	8,333	905	1,740	449
Never married	717	872	338	6,988	543	761	363
Race/Hispanic response in ACS							
Single-race AIAN, non-Hispanic	2,833	1,312	519	43,377	3,237	3,513	724
Any other response	4,467	8,759	2,032	6,968	2,931	7,054	1,761
AIAN ancestry							
AIAN ancestry reported at all	5,828	4,886	1,215	46,208	5,145	6,899	1,277
No AIAN ancestry reported	1,472	5,185	1,336	4,137	1,023	3,668	1,208
Connection to AIAN communities							
Reported a tribe in at least one census	7,008	7,406	1,649	49,681	5,953	8,157	1,434

S1: Non-Hispanic single-race AIAN]	Left to		a,	Join	ned from	
Race/Hisp in non-AIAN year	AIAN+	W	Else	Stayers	AIAN+	W	Else
Did not report a tribe in 2000 or 2010	292	2,665	902	664	215	2,410	1,051
Lived in Am. Ind. area both censuses	2,317	1,254	458	31,676	2,089	1,870	436
In Am. Ind. area in 2000 but not 2010	567	1,118	202	3,088	392	302	99
In Am. Ind. area in 2010 but not 2000	594	198	91	3,369	492	1,160	198
Not in Am. Ind. area in 2000 or 2010	3,822	7,501	1,800	12,212	3,195	7,235	1,752
Residence							
Residential migrant	1,075	1,984	443	4,715	866	1,753	407
No indication of residential migration	6,225	8,087	2,108	45,630	5,302	8,814	2,078
In Northeast	408	838	390	1,372	313	709	356
In Midwest	1,728	2,628	312	9,745	1,414	2,417	324
In South	2,768	4,293	736	14,744	2,665	5,240	866
In West	2,396	2,312	1,113	24,484	1,776	2,201	939
Total N	7,300	10,071	2,551	50,345	6,168	10,567	2,485
Total ages 25+	4,909	7,615	1,510	35,538	4,171	7,333	1,518

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = American Indian/Alaska Native. AIAN+ = non-Hispanic multiple-race AIAN. W = non-Hispanic single-race white. Else = any other race/Hispanic origin response. Stayers are in the subpopulation in both censuses. ACS race/ethnicity response is not taken into account in this classification; see Table 2.

Appendix Table F: Characteristics of people who joined, left, and stayed in the non-Hispanic multiple-race AIAN (S2) group

S2: Non-Hispanic multiple-race AIAN		Left to		G,	Joi	•••	
Race/Hisp in non-AIAN year	AIAN	W	Else	Stayers	AIAN	W	Else
Gender and age							
Girl/Woman	3,276	12,441	3,460	7,134	3,975	13,869	4,151
Boy/Man	2,892	11,358	2,718	5,556	3,325	13,278	3,166
Age 0-9	254	549	230	465	284	880	306
Age 10-24	1,743	4,926	1,742	3,239	2,107	6,846	2,267
Age 25-39	1,124	4,569	1,202	2,071	1,668	5,141	1,538
Age 40-64	2,402	10,404	2,366	5,255	2,561	11,098	2,568
Age 65 or older	645	3,351	638	1,660	680	3,182	638
Citizenship and English language ability							
U.S. born and/or citizen of the U.S.	6,153	23,767	5,989	12,651	7,280	27,105	7,211
Foreign-born non-citizen	15	32	189	39	20	42	106
Speaks English 'very well' or only	6,111	23,648	5,771	12,578	7,240	26,969	7,051
Speaks English less than 'very well'	57	151	407	112	60	178	266
Poverty (range 0-999)							
Mean income as a per cent of poverty line	336%	349%	347%	349%	322%	337%	324%

S2: Non-Hispanic multiple-race AIAN		Left to		G.	Joi	ned from	
Race/Hisp in non-AIAN year	AIAN	W	Else	Stayers	AIAN	W	Else
Education (ages 25+ only)							
Less than high school	435	2,370	437	817	582	2,626	474
High school or GED	1,323	5,483	877	2,352	1,412	5,631	989
Some college	1,565	6,700	1,607	3,460	1,865	7,073	1,945
Bachelor's degree	558	2,340	797	1,368	659	2,526	840
Graduate or professional degree	290	1,431	488	989	391	1,565	496
Labor force (ages 25+ only)							
In the labor force, employed	2,539	10,588	2,638	5,148	3,009	11,240	2,895
In the labor force, not employed	185	891	261	485	224	1,028	342
Not in the labor force	1,447	6,845	1,307	3,353	1,676	7,153	1,507
Marital status (ages 25+ only)							
Currently married	2,723	11,566	2,120	5,264	3,014	11,576	2,136
Widowed, separated or divorced	905	4,445	1,144	2,391	1,178	5,320	1,382
Never married	543	2,313	942	1,331	717	2,525	1,226
Race/Hispanic response in ACS							
Multiple-race AIAN, non-Hispanic	1,892	3,271	810	7,565	3,100	7,336	2,099
Any other response	4,276	20,528	5,368	5,125	4,200	19,811	5,218
AIAN ancestry							
AIAN ancestry reported at all	5,145	8,734	1,263	8,026	5,828	12,295	2,203
No AIAN ancestry reported	1,023	15,065	4,915	4,664	1,472	14,852	5,114
Connection to AIAN communities							
Reported a tribe in at least one census	5,953	16,308	2,873	11,422	7,008	18,018	3,493
Did not report a tribe in 2000 or 2010	215	7,491	3,305	1,268	292	9,129	3,824
Lived in Am. Ind. area both censuses	2,089	1,562	169	2,026	2,317	2,008	221
In Am. Ind. area in 2000 but not 2010	392	1,783	213	633	567	513	99
In Am. Ind. area in 2010 but not 2000	492	409	70	785	594	2,417	244
Not in Am. Ind. area in 2000 or 2010	3,195	20,045	5,726	9,246	3,822	22,209	6,753
Residence							
Residential migrant	866	3,974	1,060	1,787	1,075	4,522	1,334
No indication of residential migration	5,302	19,825	5,118	10,903	6,225	22,625	5,983
In Northeast	313	2,660	1,235	1,202	408	3,223	1,297
In Midwest	1,414	6,702	1,194	3,212	1,728	7,225	1,485
In South	2,665	8,456	1,953	3,913	2,768	10,095	2,572
In West	1,776	5,981	1,796	4,363	2,396	6,604	1,963
Total N	6,168	23,799	6,178	12,690	7,300	27,147	7,317
Total ages 25+	4,171	18,324	4,206	8,986	4,909	19,421	4,744

 $Sources: Census\ 2000,\ 2010\ Census,\ and\ 2006-2010\ 5-year\ American\ Community\ Survey\ data.$

Notes: AIAN = American Indian/Alaska Native. AIAN = non-Hispanic single-race AIAN. W = non-Hispanic single-race white. Else = any other race/Hispanic response. Stayers are in the subpopulation in both censuses. ACS race/ethnicity response is not taken into account in this classification; see Table 2.

Appendix Table G: Characteristics of people who joined, left, and stayed in the Hispanic single-race AIAN (S3) group

S3: Hispanic single-race AIAN	L	eft to		g,	Joined from			
Race/Hisp in non-AIAN year	H, SOR	Н, W	Else	Stayers	H, SOR	H,W	Else	
Gender and age								
Girl/Woman	970	1,323	983	910	1,431	907	946	
Boy/Man	929	1,161	889	770	1,451	860	778	
Age 0-9	57	97	93	76	120	70	93	
Age 10-24	595	681	696	536	865	501	708	
Age 25-39	445	533	396	378	753	410	370	
Age 40-64	711	979	588	599	1,008	645	466	
Age 65 or older	91	194	99	91	136	141	87	
Citizenship and English language ability								
U.S. born and/or citizen of the U.S.	1,515	2,188	1,809	1,613	2,400	1,516	1,675	
Foreign-born non-citizen	384	296	63	67	482	251	49	
Speaks English 'very well' or only	1,265	1,893	1,706	1,531	2,045	1,331	1,593	
Speaks English less than 'very well'	634	591	166	149	837	436	131	
Poverty (range 0-999)								
Mean income as a per cent of poverty line	249%	287%	280%	310%	274%	292%	282%	
Education (ages 25+ only)								
Less than high school	534	557	234	205	643	394	183	
High school or GED	333	466	305	288	528	334	292	
Some college	286	475	376	409	504	317	316	
Bachelor's degree	59	137	105	108	153	103	84	
Graduate or professional degree	35	71	63	58	69	48	48	
Labor force (ages 25+ only)								
In the labor force, employed	838	1,087	649	678	1,317	765	571	
In the labor force, not employed	69	105	93	66	119	77	77	
Not in the labor force	340	514	341	324	461	354	275	
Marital status (ages 25+ only)								
Currently married	803	1,057	574	635	1,213	737	496	
Widowed, separated or divorced	230	392	261	219	343	243	239	
Never married	214	257	248	214	341	216	188	
Race/Hispanic response in ACS								
Single-race AIAN, Hispanic	116	146	393	855	440	234	541	
Any other response	1,783	2,338	1,479	825	2,442	1,533	1,183	
AIAN ancestry								
AIAN ancestry reported at all	108	224	1,031	1,032	357	238	1,066	
No AIAN ancestry reported	1,791	2,260	841	648	2,525	1,529	658	
Connection to AIAN communities	,	,			,	, ,		
Reported a tribe in at least one census	802	1,065	1,490	1,469	1,373	755	1,402	
	002	1,000	2,170	1,107	1,073	155	1,102	

S3: Hispanic single-race AIAN	L	eft to		g.	Joined from			
Race/Hisp in non-AIAN year	H, SOR	H, W	Else	Stayers	H, SOR	H,W	Else	
Did not report a tribe in 2000 or 2010	1,097	1,419	382	211	1,509	1,012	322	
S./Central Amer. tribe in 2000 or 2010	561	549	202	276	843	366	150	
Lived in Am. Ind. area both censuses	20	21	392	252	33	18	383	
In Am. Ind. area in 2000 but not 2010	98	129	112	93	24	10	93	
In Am. Ind. area in 2010 but not 2000	14	11	89	122	156	102	111	
Not in Am. Ind. area in 2000 or 2010	1,767	2,323	1,279	1,213	2,669	1,637	1,137	
Residence								
Residential migrant	223	335	267	221	410	296	225	
No indication of residential migration	1,676	2,149	1,605	1,459	2,472	1,471	1,499	
In Northeast	217	188	166	85	380	165	152	
In Midwest	169	182	276	190	276	210	234	
In South	404	852	368	297	676	552	365	
In West	1,109	1,262	1,062	1,108	1,550	840	973	
Total N	1,899	2,484	1,872	1,680	2,882	1,767	1,724	
Total ages 25+	1,247	1,706	1,083	1,068	1,897	1,196	923	

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = American Indian/Alaska Native. H, SOR = Hispanic single-race Some Other Race. H, W = Hispanic single-race white. Else = any other race/Hispanic origin response. Stayers are in the subpopulation in both censuses. ACS race/ethnicity response is not taken into account in this classification; see Table 2.

Appendix Table H: Characteristics of people who joined, left, and stayed in the Hispanic multiple-race AIAN (S4) group

S4: Hispanic multiple-race AIAN	L	eft to		g,	Joined from			
Race/Hisp in non-AIAN year	H, SOR	Н, W	Else	Stayers	H, SOR	H, W	Else	
Gender and age								
Girl/Woman	212	748	955	553	869	884	1,393	
Boy/Man	213	623	772	444	803	755	1,176	
Age 0-9	23	53	127	93	59	85	176	
Age 10-24	137	419	720	431	441	565	1,164	
Age 25-39	109	281	392	177	467	356	521	
Age 40-64	136	505	411	254	621	534	599	
Age 65 or older	20	113	77	42	84	99	109	
Citizenship and English language ability								
U.S. born and/or citizen of the U.S.	353	1,276	1,699	977	1,410	1,510	2,518	
Foreign-born non-citizen	72	95	28	20	262	129	51	
Speaks English 'very well' or only	314	1,191	1,633	949	1,219	1,382	2,445	
Speaks English less than 'very well'	111	180	94	48	453	257	124	
Poverty (range 0-999)								

S4: Hispanic multiple-race AIAN	L	eft to		C4	Joined from			
Race/Hisp in non-AIAN year	H, SOR	H, W	Else	Stayers	H, SOR	H, W	Else	
Mean income as a per cent of poverty line	330%	377%	322%	350%	311%	336%	306%	
Education (ages 25+ only)								
Less than high school	74	177	106	36	319	201	151	
High school or GED	56	178	227	90	252	230	319	
Some college	76	287	348	190	347	330	488	
Bachelor's degree	32	149	129	87	148	150	183	
Graduate or professional degree	27	108	70	70	106	78	88	
Labor force (ages 25+ only)								
In the labor force, employed	198	615	568	334	832	658	757	
In the labor force, not employed	13	47	50	25	63	59	107	
Not in the labor force	54	237	262	114	277	272	365	
Marital status (ages 25+ only)								
Currently married	163	547	481	275	724	582	634	
Widowed, separated or divorced	42	190	186	102	240	194	305	
Never married	60	162	213	96	208	213	290	
Race/Hispanic response in ACS								
Multiple-race AIAN, Hispanic	26	134	260	476	162	230	533	
Any other response	399	1,237	1,467	521	1,510	1,409	2,036	
AIAN ancestry								
AIAN ancestry reported at all	32	176	517	380	187	287	980	
No AIAN ancestry reported	393	1,195	1,210	617	1,485	1,352	1,589	
Connection to AIAN communities								
Reported a tribe in at least one census	201	781	1,119	813	765	831	1,746	
Did not report a tribe in 2000 or 2010	224	590	608	184	907	808	823	
S./Central Amer. tribe in 2000 or 2010	122	316	161	126	464	319	241	
Lived in Am. Ind. area both censuses	-	7	103	45	18	23	179	
In Am. Ind. area in 2000 but not 2010	16	70	95	36	9	15	76	
In Am. Ind. area in 2010 but not 2000	-	11	57	55	67	79	176	
Not in Am. Ind. area in 2000 or 2010	401	1,283	1,472	861	1,578	1,522	2,138	
Residence								
Residential migrant	59	224	295	142	270	287	431	
No indication of residential migration	366	1,147	1,432	855	1,402	1,352	2,138	
In Northeast	78	140	185	106	314	195	321	
In Midwest	39	182	249	153	152	188	359	
In South	71	329	385	146	368	423	566	
In West	237	720	908	592	838	833	1,323	
Total N	425	1,371	1,727	997	1,672	1,639	2,569	
Total ages 25+	265	899	880	473	1,172	989	1,229	

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: A dash "-" indicates that the cell is suppressed for disclosure avoidance purposes. AIAN = American Indian/Alaska Native. H, SOR = Hispanic single-race Some Other Race. H, W = Hispanic single-race white. Else = any other race/

Hispanic origin response. Stayers are in the subpopulation in both censuses. ACS race/ethnicity response is not taken into account in this classification; see Table 2.

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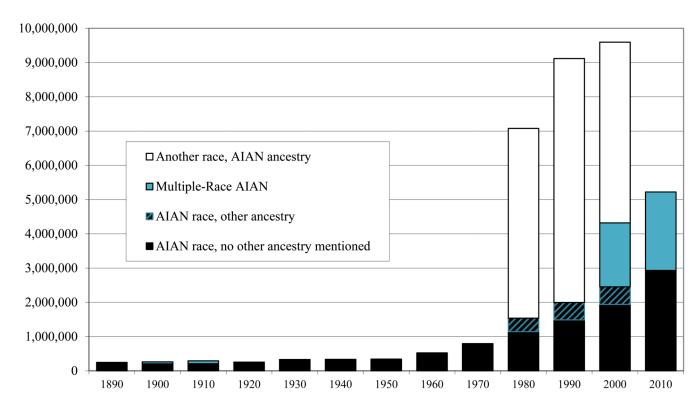


Figure 1. American Indians and Alaska Natives (AIANs), by identification: 1890-2010 Sources: 1890: US Census Office, *Indians Taxed and Indians Not Taxed in the United States (except Alaska) at the Eleventh Census: 1890* (Washington, DC: GPO 1894) cited in Shoemaker (p.4); 1900-2000: Decennial censuses from the Integrated Public Use Microdata Series (ipums.org/usa); 2010: Humes et al. 2011. Note that multiple-race responses were possible only in 1900, 1910, 2000, and 2010. The ancestry question was asked in 1980-2000 only.

Reprinted with permission from Liebler (2010a) Figure 1.

Table 1
Number of Cases Excluded during Decennial Linked Data Case Selection

Description	Number
Persons in linked data who whose race response included AIAN in Census 2000 and/or the 2010 Census	4,140,582
Case selection exclusions (multiple exclusions can apply)	
Data gathered from a neighbor or other proxy respondent	131,789
Person lived in group quarters and thus likely drawn from administrative records * or an unfamiliar person	156,825
Race or Hispanic origin information was edited or imputed (because it was non-standard, unclear, or missing)	614,376
Person was reported to age less than 8 years or more than 12 years between decennial censuses	135,616
All age data was imputed in 2000 and/or 2010	94,286
Gender in 2010 did not match gender in 2000	36,944
Gender data was imputed in 2000 and/or 2010	98,111
Census 2000 response was Some Other Race and another race and thus subject to processing errors **	115,795
2010 race and Hispanic data were collected with an alternative questionnaire ***	7,749
Persons in linked data whose race response included AIAN in 2000 and/or 2010, after exclusions	3,059,818

Sources: Census 2000 and 2010 Census.

Note: AIAN = American Indian/Alaska Native

^{*} See Chun and Gan (2014).

^{**} See U.S. Census Bureau (2007) for more information.

 $[\]ensuremath{^{**}}$ For more information on alternative questionnaires see Compton et al. (2012).

Table 2 Construction of Independent Variables

Measure	Definition (Note that all information is drawn from the ACS unless specified.)
Gender	= Girl/woman or boy/man. Answer is required to match across sources.
Age	= Age of the person in five categories: 0-9, 10-24, 25-39, 40-64, 65 or older.
Citizenship	= Citizenship status coded as (a) U.S. citizen by birth or naturalization, or (b) non-U.S. citizen.
English language ability	= English language ability coded into two categories as (a) speaks English only, speaks English "very well", or was age 4 in the ACS * and (b) speaks English "well", "not well", or "not at all."
Income relative to poverty	= Family income in relation to poverty line ranging from 0 (no income) to 999 (income is 999% of poverty line). A small number of children in uncommon family structures were not assigned a value by the Census Bureau, so we assigned each their age-specific mean value for the descriptive tables. People under age 25 are excluded from the multivariate models shown here.
Education	= Educational attainment for people ages 25 and older coded into five cateogries: (a) less than high school; (b) high school or equivalent degree; (c) some college or associated degree; (d) Bachelor's degree; or (e) graduate or professional degree.
Labor force participation	= Labor force participation for people ages 25 and older based on reponses to a series of ACS questions. We use the following categories: (a) employed in the labor force; (b) in the labor force but not employed; and (c) not in the labor force.
Marital status	= Marital status for adults ages 25 and older categorized as: currently married; widowed, separated or divorce; or never married.
Race and Hispanic origin in the ACS	= Indicates whether the ACS race/Hispanic origin response matches the subgroup of focus. For example when describing the S1 group, this indicates whether or not the person reported non-Hispanic single-race American Indian in the ACS.
American Indian ancestry	= Indicates an American Indian/Alaska Native response to ACS question on ancestry which asked: "What is this person's ancestry or ethnic origin?"
Any tribe response	= Indicates that there was any response in the fill-in-the-blank space for 'enrolled or principal tribe' within the decennial census race questions **; see Liebler and Zacher (2012).
Central/South American tribe	= Indicates that only Central and/or South American tribes were named in the 'enrolled or principal tribe' response area. **
American Indian Area	= Indicates whether they lived in an "American Indian Area," which we define as a place which is a census-defined American Indian or Alaska Native Area *** or a census block with at least 20 per cent American Indian population that year. We coded by year as: (a) in 2000, (b) in 2010, (c) in both, or (d) in neither. **
Residential Migrant	= Indicates residential migration, defined here as: Reported on the ACS that the person lived in a different residence one year ago OR the person's state of residence varies across the three data sources.
Region	= Region of residence in the ACS year **.

 $[\]ensuremath{^{*}}$ The ACS only asks English language proficiency for those ages 5 and older

^{**} When comparing joiners to leavers within subgroups we measure tribe responses given in the year the individual was in the focal subgroup.

^{***} See U.S. Census Bureau 1994

In 2000, about one-fifth of people living in census-defined American Indian and Alaska Native Areas were American Indian (21.7 percent). In 2010, the median rose to 26.7 per cent.

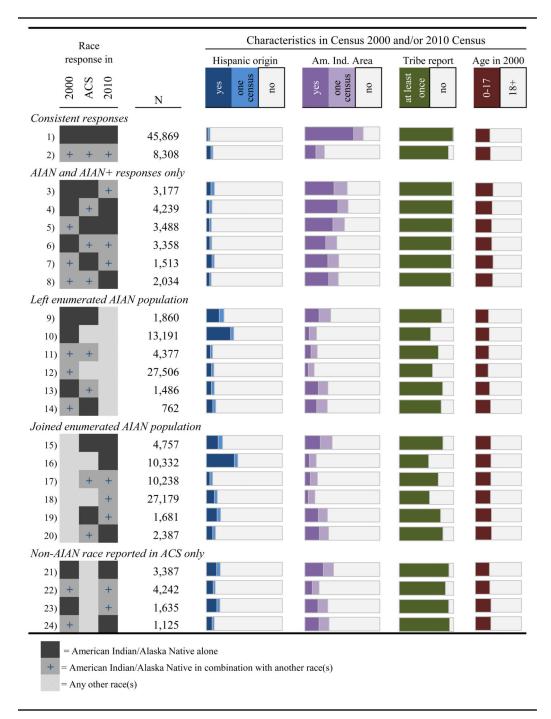
 $\label{thm:continuous} \begin{tabular}{ll} Table 3 \\ Race/ethnicity\ responses\ in\ 2000\ and\ 2010\ among\ American\ Indians\ in\ the\ decennial\ sample\ of\ linked\ data\ from\ Census\ 2000\ and\ the\ 2010\ Census\ \end{tabular}$

	Race and ethnicity in 2010 Non-Hispanic Hispanic													
			Hispanic											
	Total	Single-race				Multiple-race		Single-race				Multiple-race		Else
Race and ethnicity in 2000		white	black	AIAN	Any other	white & AIAN	Other AIAN+	white	black	AIAN	SOR	white & AIAN	Other AIAN+	
Total	3,059,818	523,708	87,428	1,042,724	27,160	650,450	234,836	81,899	4,879	168,481	57,462	71,546	71,786	37,459
Non-Hispanic														
Single-race														
white	622,316			173,415		404,209	19,997			6,917		13,248	4,530	
black	139,108			22,793		1,910	107,491			852		147	5,915	
AIAN	1,045,627	158,178	16,307	723,326	5,413	99,910	12,042	4,800	265	14,324	3,068	2,651	2,336	3,007
Any other	24,864			5,094		1,276	16,672			458		155	1,209	
Multiple-race														
white & AIAN	575,680	339,481	1,074	87,809	1,035	134,523	3,081	2,511	21	1,120	478	1,970	411	2,166
Other AIAN+	179,635	10,446	67,267	7,166	19,262	1,821	50,460	219	583	184	194	60	1,705	20,268
Hispanic														
Single-race														
white	83,101			4,449		2,400	626			41,046		21,529	13,051	
black	6,146			225		39	597			1,674		141	3,470	
AIAN	163,775	5,557	615	11,221	460	1,094	398	49,825	1,696	32,531	44,747	6,260	4,885	4,486
SOR	104,586			3,971		679	539			63,136		14,944	21,317	
Multiple-race														
white & AIAN	59,341	8,914	65	1,769	114	1,555	132	21,525	87	4,837	6,448	9,923	1,691	2,281
Other AIAN+	26,594	1,132	2,100	365	876	83	1,404	3,019	2,227	772	2,527	271	6,567	5,251
Else	29,045			1,121		951	21,397			630		247	4,699	

Sources: Census 2000 and 2010 Census.

Notes: AIAN = American Indian/Alaska Native; SOR = Some Other Race; Other AIAN+ = another multiple-race response that includes AIAN. Else = any other race/Hispanic origin response. Boxed cells highlight the stayers in each of the four subgroups.

Table 4
Race responses in Census 2000, the ACS, and the 2010 Census



Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = American Indian/Alaska Native. Data include people who responded to the 2000 and 2010 censuses and ACS in 2006-2010. Hispanic responses and response changes are not taken into account in this table.

characteristics of four subgroups of American Indians, by response stability

Cander and age Clavers Stayers Joiners Leavers Sinyers Sinyers Grirl/Woman 82% 53% 51% 55% 56% Boy/Man 48% 47% 49% 44% 44% Age 0-9 3% 26% 26% 26% 26% 44% Age 10-24 26% 26% 28% 44% 44% 44% Age 10-24 26% 26% 26% 28% 26% 26% Age 10-24 26% 26% 26% 28% 26% 26% Age 10-24 26% 26% 26% 26% 26% 26% Age 65 or older 10% 11% 10% 11% 11% 11% Cricerarship and Engish Imgrage ability 16 10% 10% 11% 11% 11% Speaks Engish Very well or only 16 6% 10% 11% 10% 10% 10% 10% 10% 10% 10% 10% <th>Column %</th> <th>S1: Non-His</th> <th>S1: Non-Hispanic single-race AIAN</th> <th>ace AIAN</th> <th>S2: Non-Hisp</th> <th>S2: Non-Hispanic multiple-race AIAN</th> <th>race AIAN</th>	Column %	S1: Non-His	S1: Non-Hispanic single-race AIAN	ace AIAN	S2: Non-Hisp	S2: Non-Hispanic multiple-race AIAN	race AIAN
52% 53% 51% 53% 53% 53% 53% 48% 47% 49% 47% 33% 26% 26% 26% 28% 23% 23% 10% 11% 11		Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
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3% 3% 4% 3% 26% 26% 28% 23% 23% 20% 19% 19% 38% 40% 39% 42% 10% 11% 10% 13% sge ability 10% 10% 13% nr only 99% 100% 10% sr only 99% 94% 99% 1% sr only 96% 1% 2% sr only 1% 6% 1% 2% sr only 326% 274% 333% 347% stree 14% 19% 14% 12% gree 7% 4% 6% 8% l 6% 33% 37% 8% l 6% 13% 6% 8% gree 7% 4% 6% 8% stee 7% 4% 6% 8% stee 7% 6% 8% 8% stee 7% 6% 8% 8% s	Boy/Man	48%	47%	49%	47%	44%	47%
26% 26% 28% 23% 23% 23% 23% 23% 23% 20% 19% 19% 23% 20% 20% 20% 20% 20% 20% 20% 20% 20% 20	Age 0-9	3%	3%	4%	3%	4%	4%
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age ability 10% 11% 10% 13% he U.S. 99% 100% 10% 13% he U.S. 99% 100% 10% 10% or only 99% 94% 99% 98% or only 99% 94% 99% 98% sty well* 1% 6% 1% 25% sty well* 14% 19% 14% 12% 30% 33% 31% 29% gree 7% 4% 6% 8% I 6% 13% 14% 12% gree 7% 4% 6% 8% I 5% 57% 61% 59% yed 5% 57% 61% 56% yed 5% 34% 36% 58% yed 5% 61% 56% 56% yed 57% 63% 61% 61%	Age 25-39	23%	20%	19%	19%	16%	20%
rege ability he U.S. 99% 100% 100% 99% ronly sty well' figure 1	Age 40-64	38%	40%	39%	42%	41%	39%
re ability be U.S. 198 1008 1008 998 198 198 198 1	Age 65 or older	10%	11%	10%	13%	13%	11%
he U.S. 99% 100% 100% 99% or only 1% 0% 0% 1% 1% or only 99% 94% 99% 98% or only 1% 6% 1% 2% 1% 2% 336% 336% 338% 347% 36% 35% 36% 35% 36% 35% or of one of	Citizenship and English language ability						
ronly 99% 94% 99% 1% 1% 1% 1% 1% 1% 1% 6% 1% 1% 2% 33.3% 3.47% 14% 12% 33.3% 3.47% 3.47% 3.47% 3.47% 3.47% 3.47% 3.47% 3.47% 3.40% 3	U.S. born and/or citizen of the U.S.	%66	100%	100%	%66	100%	100%
ronly 99% 94% 99% 98% 15	Foreign-born non-citizen	1%	%0	%0	1%	%0	%0
ry well* 1% 6% 1% 2% of poverty line 326% 274% 333% 347% 14% 19% 14% 12% 30% 33% 31% 29% 30% 35% 36% 37% gree 7% 4% 6% 8% 1 60% 57% 61% 59% yyed 5% 34% 36% 5% 5% 5% 5% 60% 57% 61% 5% 5% 36% 34% 36%	Speaks English 'very well' or only	%66	94%	%66	%86	%66	%66
of poverty line 326% 274% 333% 347% 147% 198 148 128 298 36% 35% 36% 37% 148% 128% 35% 36% 37% 148% 168% 35% 36% 34% 36% 35% 36% 34% 36% 61% 62% 57% 63% 61%	Speaks English less than 'very well'	1%	%9	1%	2%	1%	1%
of poverty line 326% 274% 333% 347% 14% 19% 14% 12% 30% 33% 31% 29% 36% 35% 36% 37% 12% 9% 13% 14% 12% 9% 13% 14% 1 60% 57% 61% 59% yed 5% 36% 36% yed 5% 36% 36% 62% 57% 63% 61%	Poverty (range 0-999)						
14% 19% 14% 12% 30% 33% 31% 29% 2 36% 35% 36% 37% 3 gree 7% 4% 6% 8% 1 1 60% 57% 61% 59% 5 syed 5% 36% 34% 36% 5 62% 57% 63% 61% 5	Mean income as a per cent of poverty line	326%	274%	333%	347%	349%	332%
H4% 19% 14% 12% 12% 33% 31% 29% 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	Education (ages 25+ only)						
30% 33% 31% 29% 35% 36% 37% 31% 29% 35% 36% 37% 31% 12% 9% 13% 14% 14% 14% 14% 26% 37% 26% 35% 35% 34% 34% 36% 21% 26% 35% 25% 35% 35% 35% 35% 26% 35% 25% 35% 25% 35% 25% 25% 25% 25% 25% 25% 25% 25% 25% 2	Less than high school	14%	19%	14%	12%	%6	13%
36% 35% 36% 37% 12% 9% 13% 14% 12% 9% 13% 14% 1 60% 57% 61% 59% 3yed 5% 7% 5% 5% 35% 36% 34% 36% 5% 62% 57% 63% 61% 5	High school or GED	30%	33%	31%	29%	26%	28%
Honey Biree 7% 4% 6% 8% 14% 14% 14% 14% 14% 14% 14% 14% 14% 14	Some college	36%	35%	36%	37%	39%	37%
Figure 7% 4% 6% 8% 8% 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	Bachelor's degree	12%	%6	13%	14%	15%	14%
1 60% 57% 61% 59% 53% 35% 35% 34% 36% 61% 62% 57% 63% 61%	Graduate or professional degree	7%	4%	%9	%8	11%	%8
1 60% 57% 61% 59% 53% 35% 36% 34% 36% 61% 62% 57% 63% 61%	Labor force (ages 25+ only)						
yed 5% 7% 5% 5% 34 5% 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	In the labor force, employed	%09	27%	61%	%65	27%	%65
35% 36% 34% 36% 62% 57% 63% 61%	In the labor force, not employed	2%	7%	2%	2%	2%	2%
62% 57% 63% 61%	Not in the labor force	35%	36%	34%	36%	37%	36%
62% 57% 63% 61%	Marital status (ages 25+ only)						
	Currently married	62%	21%	93%	61%	26%	28%

	The transfer and the tr						
	Leavers	Stayers	Joiners		Leavers	Stayers	Joiners
Widowed, separated or divorced	24%	23%	24	24%	24%	27%	27%
Never married	14%	20%	13	13%	14%	15%	15%
Race/Hispanic response in ACS							
Same as stayers in this sub-group	23%	%98	39	39%	17%	%09	30%
Different from stayers in sub-group	<i>%LL</i>	14%	61	61%	83%	40%	%0/
AIAN ancestry							
AIAN ancestry reported at all	%09	95%	69	%69	42%	63%	49%
No AIAN ancestry reported	40%	8%	31	31%	28%	37%	51%
Connection to AIAN communities							
Reported a tribe in at least one census	81%	%66	81	81%	%02	%06	%89
Did not report a tribe in 2000 or 2010	19%	1%	19	19%	30%	10%	32%
S./Central Amer. tribe in 2000 or 2010	1%	%0	0	%0	1%	%0	%0
Lived in American Indian area both censuses	20%	63%	23	23%	11%	16%	11%
In American Indian area in 2000 but not 2010	%6	%9	4	4%	7%	2%	3%
In Amer. Indian area in 2010 but not 2000	4%	7%	10	10%	3%	%9	%8
Not in American Indian area in 2000 or 2010	%99	24%	63	63%	%08	73%	78%
Residence							
Residential migrant	18%	%6	16	16%	16%	14%	17%
No indication of residential migration	82%	91%	8	84%	84%	%98	83%
In Northeast	8%	3%	7	7%	12%	%6	12%
In Midwest	23%	19%	22	22%	26%	25%	25%
In South	39%	29%	46	46%	36%	31%	37%
In West	29%	49%	26	26%	26%	34%	79%
Total N	19,922	50,345	19,220		36,145	12,690	41,764
Total ages 25+	14,034	35,538	13,022		26,701	8,986	29,074
Column %	S3: Hispan	S3: Hispanic single-race AIAN	AIAN	S4: Hispan	84: Hispanic multiple-race AIAN	race AIAN	
	Leavers	Stayers J	Joiners	Leavers	Stayers	Joiners	

Column %	S3: Hispai	S3: Hispanic single-race AIAN	ace AIAN	S4: Hispan	<i>S4</i> : Hispanic multiple-race AIAN	ace AIAN
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
Girl/Woman	52%	54%	52%	54%	25%	54%
Boy/Man	48%	46%	48%	46%	45%	46%
Age 0-9	4%	2%	4%	%9	%6	2%
Age 10-24	32%	32%	33%	36%	43%	37%
Age 25-39	22%	23%	24%	22%	18%	23%
Age 40-64	36%	36%	33%	30%	25%	30%
Age 65 or older	%9	2%	%9	%9	4%	2%
Citizenship and English language ability						
U.S. born and/or citizen of the U.S.	%88	%96	%88	94%	%86	92%
Foreign-born non-citizen	12%	4%	12%	%9	2%	%8
Speaks English 'very well' or only	78%	91%	78%	%68	%56	%98
Speaks English less than 'very well'	22%	%6	22%	11%	2%	14%
Poverty (range 0-999)						
Mean income as a per cent of poverty line	273%	310%	281%	344%	350%	316%
Education (ages 25+ only)						
Less than high school	33%	19%	30%	17%	%8	20%
High school or GED	27%	27%	29%	23%	19%	24%
Some college	28%	38%	28%	35%	40%	34%
Bachelor's degree	7%	10%	8%	15%	18%	14%
Graduate or professional degree	4%	2%	4%	10%	15%	%8
Labor force (ages 25+ only)						
In the labor force, employed	64%	93%	%99	%89	71%	%99
In the labor force, not employed	7%	%9	%L	2%	2%	7%
Not in the labor force	30%	30%	27%	27%	24%	27%
Marital status (ages 25+ only)						
Currently married	%09	29%	61%	28%	28%	21%
Widowed, separated or divorced	22%	21%	21%	20%	22%	22%
Never married	18%	20%	19%	21%	20%	21%
Race/Hispanic response in ACS						
Same as stayers in this sub-group	10%	51%	19%	12%	48%	16%
Different from stayers in sub-group	%06	49%	81%	%88	52%	84%

Column %	S3: Hispan	S3: Hispanic single-race AIAN	ace AIAN	S4: Hispani	S4: Hispanic multiple-race AIAN	ace AIAN
	Leavers	Stayers	Joiners	Leavers	Stayers	Joiners
AIAN ancestry						
AIAN ancestry reported at all	22%	61%	26%	21%	38%	25%
No AIAN ancestry reported	78%	39%	74%	%6 <i>L</i>	62%	75%
Connection to AIAN communities						
Reported a tribe in at least one census	54%	81%	25%	%09	82%	21%
Did not report a tribe in 2000 or 2010	46%	13%	45%	40%	18%	43%
S./Central Amer. tribe in 2000 or 2010	21%	16%	21%	17%	13%	17%
Lived in American Indian area both censuses	%L	15%	7%	3%	2%	4%
In American Indian area in 2000 but not 2010	2%	%9	2%	2%	4%	2%
In Amer. Indian area in 2010 but not 2000	2%	7%	%9	2%	%9	2%
Not in American Indian area in 2000 or 2010	%98	72%	85%	%06	%98	%68
Residence						
Residential migrant	13%	13%	15%	16%	14%	17%
No indication of residential migration	81%	81%	85%	84%	%98	83%
In Northeast	%6	2%	11%	11%	11%	14%
In Midwest	10%	11%	11%	13%	15%	12%
In South	26%	18%	25%	22%	15%	23%
In West	25%	%99	53%	53%	29%	51%
Total N	6,255	1,680	6,373	3,523	766	5,880
Total ages 25+	4.036	1.068	4.016	2.044	473	3,390

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = American Indian/Alaska Native. Leavers are in the subgroup in 2000 but not 2010. Joiners are in the subgroup in 2010 but not 2000.

Stayers are in the subgroup in both censuses. ACS race/ethnicity response is not taken into account in this classification.

Four multinomial logistic regression models predicting membership in the leaver or joiner group, as opposed to the stayer group Ages 25 and older

	S1: Non-Hispan	S1: Non-Hispanic single-race AIAN	S2: Non-Hispani	S2: Non-Hispanic multiple-race AIAN	S3: Hispanic	S3: Hispanic single-race AIAN	S4: Hispanic n	S4: Hispanic multiple-race AIAN
	Leaver	Joiner	Leaver	Joiner	Leaver	Joiner	Leaver	Joiner
	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)
Intercept	0.06	0.06	0.56 ***	1.20 **	0.47 ***	1.07	0.59	2.25 *
Woman	0.93 **	0.93 **	%*** 68·0	0.85 ***	96.0	0.93	0.70 **	69.0
Age 40-64	0.73 ***	0.89	0.88 ***	0.76	1.03	0.83 *	06.0	0.82
Age 65 or older	0.67 ***	0.83 ***	0.81 ***	0.61 ***	1.03	0.94	0.89	0.65 *
Foreign-born non-citizen	0.56 ***	0.56 ***	68.0	69.0	1.09	1.31	0.82	1.00
Speaks English less than 'very well'	0.36 ***	0.38 ***	1.23	0.94	1.30 *	1.42 **	1.24	1.64 *
Income 0-100% of poverty line	0.84 ***	* 06.0	0.94	66.0	1.14	0.97	06.0	0.97
Income 101-200% of poverty line	0.92 *	0.99	1.02	1.06	0.91	0.93	1.00	0.99
Income 301% of poverty line or higher	86.0	1.04	1.04	0.97	1.00	1.01	96.0	0.80
Less than high school	1.01	0.93	1.14 **	1.25 ***	1.08	96.0	1.50	1.45
Some college	1.04	1.00	0.94	86.0	0.93	98.0	98.0	0.87
Bachelor's degree or higher	1.09 *	1.02	0.82 ***	0.87 ***	0.87	0.87	0.74	0.70 *
Widowed, separated or divorced	1.03	96.0	%*** 68·0	1.05	1.19	1.14	1.06	1.13
Never married	0.75 ***	0.75 ***	0.87 ***	0.92 *	1.05	1.01	1.09	1.03
In the labor force, not employed	86.0	0.93	* 0.87	0.90	1.09	1.12	1.07	1.33
Not in the labor force	1.11 **	1.03	96.0	0.97	0.93	0.87	1.10	1.12
ACS race/Hisp = different from stayers	10.88 ***	5.05 ***	6.23 ***	2.82 ***	6.13 ***	2.61 ***	6.62 ***	3.79 ***
No AIAN ancestry reported	1.89 ***	1.51 ***	1.35 ***	1.14 ***	2.09 ***	1.81 ***	1.16	0.81
Did not report a tribe in either census	5.63 ***	6.86 ***	2.82 ***	3.48 ***	3.29 ***	3.54 ***	2.61 ***	3.55 ***
S./Central Amer. tribe in 2000 or 2010					1.36 **	1.40 **	1.20	1.58 **
Not in Amer. Indian area in 2000 or 2010	3.59 ***	4.04 ***	1.36 ***	1.37 ***	0.80	06:0	1.50	1.28

	S1: Non-Hispar	nic single-race AIAN	S2: Non-Hispan	S1: Non-Hispanic single-race AIAN S2: Non-Hispanic multiple-race AIAN	S3: Hispanic	S3: Hispanic single-race AIAN	S4: Hispanic	S4: Hispanic multiple-race AIAN
	Leaver	Joiner	Leaver	Joiner	Leaver	Joiner	Leaver	Joiner
	exp(β)	 exp(β)	exp(\beta)	exp(β)	exp(b)	exp(β)	exp(\beta)	 exp(β)
In Amer. Indian area in 2000 but not 2010	3.07 ***	1.51 ***	1.82 ***	0.74 ***	1.17	0.41 ***	2.33	0.59
In Amer. Indian area in 2010 but not 2000	1.40 ***	3.18 ***	0.57 ***	1.70 ***	0.26 ***	0.91	0.84	1.66
Residential migrant	1.19 ***	1.07	1.14 ***	1.10 **	1.08	1.12	1.19	1.11
In Northeast	1.34 ***	1.59 ***	1.18 ***	1.25 ***	1.22	1.58 **	76.0	1.10
In Midwest	1.19 ***	1.32 ***	1.16 ***	1.14 ***	1.00	1.25	1.07	0.98
In South	1.65 ***	2.41 ***	1.45 ***	1.54 ***	1.27 *	1.35 **	1.30	1.45 *
N in dependent variable category	14,034	13,022	26,701	29,074	4,036	4,016	2,044	3,390
R-squared	0.3931		0.1356		0.1604		0.1025	

*** p<=0.001 ** p<=0.01; * p <=0.05;

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = American Indian/Alaska Native. Numbers represent relative risk of being a leaver or joiner, as opposed to being a stayer in that subgroup. In all models, the comparison groups are: man, age 25-39, U.S. citizen, speaks English very well or only, income 201-300% of poverty level, married, high school or equivalent education, employed in the labor force, ACS race/Hispanic response same as stayers, AIAN ancestry reported a tribe in 2000 and/or 2010, never reported a Central or South American tribe, in an American Indian area, did not move residences, and in the West region.

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 $\label{thm:comparison} \mbox{Table 7}$ Predictors of five patterns of race response by non-Hispanics (comparison category is S1 stayer) Ages 25 and older

Race response in one census (non-Hisp.)		AIAN	AIAN	AIAN +
Race response in other census (non-Hisp.)	S2 Stayer (AIAN+)	AIAN +	\overline{W}	\overline{W}
	exp(β)	exp(β)	exp(β)	exp(β)
Intercept	0.03 ***	0.10 ***	0.04 ***	0.03 ***
Woman	1.11 ***	0.98	0.82 ***	0.90 ***
Age 40-64	1.13 ***	0.78 ***	0.82 ***	0.93 **
Age 65 or older	1.38 ***	0.80 ***	0.68 ***	0.97
Foreign-born non-citizen	0.32 ***	0.63 *	0.25 ***	0.11 ***
Speaks English less than 'very well'	0.26 ***	0.24 ***	0.20 ***	0.19 ***
Income 0-100% of poverty line	0.82 ***	0.79 ***	0.88 **	0.78 ***
Income 101-200% of poverty line	0.92	0.92 *	0.98	0.96
Income more than 300% of poverty line	1.04	1.05	1.12 ***	1.03
Less than high school	0.69 ***	0.79 ***	0.99	0.89 ***
Some college	1.21 ***	1.06	0.95	1.05
Bachelor's degree or higher	1.64 ***	1.23 ***	0.95	1.11 ***
Widowed, separated or divorced	1.11 **	0.97	0.94 *	1.00
Never married	0.94	0.75 ***	0.54 ***	0.67 ***
In the labor force, not employed	1.14 *	0.86 *	1.00	1.00
Not in the labor force	1.22 ***	1.14 ***	1.11 ***	1.16 ***
No AIAN ancestry reported	4.75 ***	2.05 ***	5.91 ***	10.24 ***
Did not report a tribe in 2000 or 2010	4.33 ***	1.81 ***	12.85 ***	16.41 ***
Not in American Indian area	9.15 ***	3.92 ***	10.57 ***	20.97 ***
In American Indian area in 2000 OR 2010	3.08 ***	2.13 ***	4.02 ***	5.65 ***
Residential migrant	0.91 *	1.03	1.23 ***	1.02
In Northeast	2.09 ***	1.71 ***	2.07 ***	2.48 ***
In Midwest	1.28 ***	1.43 ***	1.67 ***	1.64 ***
In South	1.95 ***	2.32 ***	4.12 ***	3.40 ***
N in dependent variable category	8,986	9,080	14,948	37,745
R-squared		0.4470		

^{*}p <=0.05;

^{**} p<=0.01;

p<=0.001

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

Notes: AIAN = single-race American Indian/Alaska Native. AIAN+ = multiple-race American Indian/Alaska Native. W = single-race white. Numbers represent the relative risk of being having this response pattern, as opposed to being an S1 Stayer (non-Hispanic single-race American Indian in both censuses; N=35,868). In all models, the comparison groups are: man, age 25-39, U.S. citizen, speaks English very well or only, income 201-300% of poverty level, married, high school or equivalent education, employed in the labor force, ACS race/Hispanic response same as stayers, AIAN ancestry reported, reported a tribe in 2000 and/or 2010, in an American Indian area, did not move residences, and in the West region.

 $\label{thm:comparison} \mbox{Table 8}$ Predictors of four patterns of race response among Hispanics (comparison category is S3 Stayer) Ages 25 and older

Race response in one census (Hispanic)	S4 Stayer	AIAN or AIAN+	AIAN or AIAN+
Race response in other census (Hispanic)	(AIAN+)	\overline{W}	SOR
	exp(β)	exp(β)	exp(β)
Intercept	0.06 ***	0.08 ***	0.17 ***
Woman	1.31 *	0.91	0.82 *
Age 40-64	0.93	1.00	0.74 ***
Age 65 or older	1.49	1.53 **	0.72 *
Foreign-born non-citizen	1.01	1.15	1.41 *
Speaks English less than 'very well'	0.67	1.17	1.70 ***
Income 0-100% of poverty line	1.07	1.02	0.96
Income 101-200% of poverty line	0.86	0.83	0.85
Income more than 300% of poverty line	1.32	1.19	1.01
Less than high school	0.53 **	0.93	1.01
Some college	1.41 *	0.94	0.90
Bachelor's degree or higher	2.39 ***	1.10	0.89
Widowed, separated or divorced	1.28	1.30 *	1.24 *
Never married	1.06	0.97	0.87
In the labor force, not employed	0.97	1.05	0.88
Not in the labor force	0.86	0.91	0.81 *
No AIAN ancestry reported	3.23 ***	6.18 ***	6.23 ***
Did not report a tribe in 2000 or 2010	1.06	5.22 ***	6.96 ***
South/Central Amer. tribe in 2000 or 2010	0.70 *	1.52 ***	2.71 ***
Not in American Indian area	2.25 **	7.83 ***	3.77 ***
In American Indian area in 2000 OR 2010	1.31	3.72 ***	1.86 **
Residential migrant	0.99	1.14	1.01
In Northeast	2.01 **	1.29	1.64 **
In Midwest	1.30	1.23	1.03
In South	1.12	2.01 ***	1.27 *
N in dependent variable category	473	4,790	4,581
R-squared		0.2341	

p <=0.05;

Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

p<=0.01;

p<=0.001

Notes: AIAN = single-race American Indian/Alaska Native. AIAN+ = multiple-race American Indian/Alaska Native. W = single-race white. SOR = single-race Some Other Race. Numbers represent the relative risk of being having this response pattern, as opposed to being an S3 Stayer (Hispanic single-race American Indian in both censuses; N=1,080). In all models, the comparison groups are: man, age 25-39, U.S. citizen, speaks English very well or only, income 201-300% of poverty level, married, high school or equivalent education, employed in the labor force, ACS race/ Hispanic response same as stayers, AIAN ancestry reported, reported a tribe in 2000 and/or 2010, never reported a Central or South American tribe, in an American Indian area, did not move residences, and in the West region.

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Odds of joining an American Indian subgroup (versus leaving the same subgroup), by the race/Hispanic response given in the non-AIAN Table 9 year Ages 25 and older

AIAN subgroup	S1: Non-Hi	S1: Non-Hispanic single-race AIAN	-race AIAN	S2: Non-His	S2: Non-Hispanic multiple-race AIAN	e-race AIAN	S3: Hispa	S3: Hispanic single-race AIAN	ace AIAN	S4: Hispani	S4: Hispanic multiple-race AIAN	ace AIAN
	AIAN+	W	else	AIAN	W	else	SOR,H	W,H	else	SOR,H	W,H	else
Race and Hispanic response when not in that AIAN subgroup	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(\beta)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)
Intercept	0.83 *	2.23 ***	0.77	2.28 ***	2.48 ***	2.40 ***	4.54 ***	2.02 **	2.25 ***	11.22 ***	2.59 **	3.34 ***
Woman	96.0	1.02	1.00	1.04	0.92 ***	96.0	96.0	0.97	1.05	1.07	1.03	96.0
Age 40-64	1.45 ***	1.14 **	1.25 *	0.70 ***	0.92 **	0.87 **	0.86	68.0	* 67.0	86.0	0.83	1.14
Age 65 or older	1.57 ***	1.08	1.34 *	0.64 ***	0.80	0.75 ***	1.03	1.05	96.0	0.75	0.63 *	1.07
Foreign-born non-citizen	1.32	1.03	0.83	0.89	1.20	0.74 *	1.04	1.33 *	1.22	0.87	1.06	1.64
Speaks English less than 'very well'	0.94	1.51	0.85	1.14	1.11	0.66 ***	1.01	1.12	0.88	1.12	1.37 *	0.88
Income 0-100% of poverty line	1.04	1.08	1.19	96.0	* 1.11	96.0	1.01	** L9.0	0.94	68.0	1.17	1.06
Income 101-200% of poverty line	0.97	1.11	1.22	1.03	1.04	1.03	1.12	86.0	0.87	89.0	66.0	1.13
Income more than 300% of poverty line	1.08	1.00	1.14	0.94	0.93 *	0.97	1.20	0.91	0.97	0.63 *	0.88	0.93
Less than high school	0.78 ***	0.94	1.14	1.29 ***	1.06	1.06	0.82 *	0.97	0.86	0.95	0.83	96.0
Some college	0.91	66.0	66.0	1.09	1.03	86.0	1.06	0.91	* 67.0	1.06	0.91	1.00
Bachelor's degree or higher	8.0	1.02	0.91	1.14 *	1.09 **	0.88	1.36 *	1.02	0.78	1.12	0.75 *	1.03
In the labor force, not employed	1.04	96.0	0.83	0.97	1.01	1.10	1.18	1.13	0.94	1.08	1.12	1.59 *
Not in the labor force	86.0	0.92 *	1.03	1.02	0.99	1.08	0.94	1.01	0.91	1.13	1.14	1.01
Widowed, separated or divorced	0.85 **	0.94	1.25 *	1.18 **	1.18 ***	1.13 *	1.01	68.0	1.05	1.19	0.92	1.16
Never married	1.03	0.95	1.32 **	0.98	1.01	1.14 *	0.95	1.25 *	0.80	0.72	1.13	1.02
ACS race/Hisp = different from stayers	0.55 ***	0.36 ***	0.50 ***	0.57 ***	0.44 ***	0.37 ***	0.42 ***	0.41 ***	0.44 ***	0.64	0.60 **	0.46 ***
No AIAN ancestry reported	0.90	0.69	0.89	1.38 ***	0.80 ***	0.80 ***	0.58 ***	0.76 *	0.84	0.62	0.64 **	0.69
Not in Am. Ind. area in AIAN year	1.04	0.92	1.16	0.87 **	0.86 ***	1.16	1.24	0.94	1.10	1.06	0.94	0.88
Did not report a tribe in AIAN year	66.0	1.03	1.42 ***	1.06	1.27 ***	1.17 ***	0.83	1.01	0.93	1.21	1.29 *	1.05

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AIAN subgroup	S1: Non-Hi	ispanic single-race AIAN	-race AIAN	S2: Non-Hi	S2: Non-Hispanic multiple-race AIAN	e-race AIAN	S3: Hispa	S3: Hispanic single-race AIAN	ace AIAN	S4: Hispar	S4: Hispanic multiple-race AIAN	ace AIAN
	AIAN+	W	else	AIAN	W	else	SOR,H	W,H	else	SOR,H	W,H	else
Race and Hispanic response when not in that AIAN subgroup	exp(b)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)	exp(β)
S./Central Amer. tribe in AIAN year							0.88	0.81	0.70	1.05	0.99	1.16
Residential migrant	0.99	0.87 **	1.00	1.04	0.99	0.95	1.24	1.14	0.81	1.14	0.88	0.94
In South in AIAN year	1.46 ***	1.32 ***	1.53 ***	0.75 ***	1.14 ***	1.50 ***	1.35 **	1.32 **	1.31 *	1.30	1.51 ***	1.06
In Northeast in AIAN year	1.01	1.12	1.07	1.02	1.14 ***	0.92	1.25	1.38 *	1.39	96.0	1.34	1.00
In Midwest in AIAN year	1.17 **	1.02	1.26	* 88.0	1.00	1.08	1.26	1.81 ***	1.18	0.79	1.13	96.0
N in model	080,6	14,948	3,028	080,6	37,745	8,950	3,144	2,902	2,006	1,437	1,888	2,109
R-squared	0.038	0.070	0.042	0.033	0.039	0.063	0.044	0.040	0.048	0.018	0.038	0.035

p <=0.05; p <=0.05; p <=0.01;

*** p<=0.001

Notes: AIAN+ = multiple-race American Indian/Alaska Native. AIAN = single-race American Indian/Alaska Native. W = non-Hispanic single-race White. W,H = Hispanic single-race White. Numbers Sources: Census 2000, 2010 Census, and 2006-2010 5-year American Community Survey data.

represent relative risk of being a joiner as opposed to being a leaver from that subgroup. In all models, the comparison groups are: stayed in the same AIAN subgroup, man, age 25-39, U.S. citizen, speaks English very well or only, income 201-300% of poverty level, married, high school or equivalent education, in the labor force, ACS race/Hispanic response same as stayers, AIAN ancestry reported, reported a tribe in 2000 and/or 2010, never reported a Central or South American tribe, in an American Indian area, did not move residences, and in the West region.