Inheriting Race: The Classification of U.S. Newborns in the Early Childhood Longitudinal Study, Birth Cohort

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Abstract

Do parents pass on race and ethnicity to their children in the way predicted by biological reasoning, where the child is the sum of the parents' characteristics? Or do parents' descriptions of their children demonstrate the fluidity and instability expected if race is a "social construct?" Using recently released data from the 2001 birth cohort of the Early Childhood Longitudinal Study, we find that while the majority of U.S. newborns are described as a biological notion of race would predict, a nontrivial proportion are not. These children are more likely to match their father's race or ethnicity than their mother's and they are less likely to be described as white. Foreign-born parents and their children are also less likely to have matching descriptions than native-born parents and their children. These findings have implications for the measurement of race and ethnicity and for understanding intergenerational processes of racial and ethnic formation.

For the past decade, exploring the racial classifications of "multiracial" Americans has been a hallmark of studies seeking to document the unstable, contextual, "socially constructed" nature of race. Studies that demonstrated how people contested racial categories, chose among the possible singe-race options and changed their responses from one context to the next (e.g., Harris and Sim 2002; Xie and Goyette 1997), delivered an implicit blow to widespread notions of race as an apolitical, inherited, biological characteristic. Starting in 2000, multiple-race reporting was adopted in the gathering of all government statistics, in part, to limit the classification inconsistencies introduced by the ever-increasing "multiracial" proportion of the U.S. population. Though heralded in many circles for its blurring of racial boundaries and anti-racist rejection of the "one-drop rule," the addition of "mark one or more" to the instructions for gathering racial data, ironically, further encourages Americans to think of their race in biological terms (Davis 2001).

As such, in the context of multiple-race reporting, any remaining racial classification inconsistency becomes especially interesting. Even when explicitly given the option to be described as the exact combination of their parents' races — the formula suggested by a biological notion of race — are some children's racial classifications still something less than, more than or completely different from the combination of their parents'?

We examine this within-family racial classification inconsistency for a nationally representative sample of 9-month-old children using data from the 2001 wave of the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B). The survey is uniquely suited to the question of how race is "inherited" in families because it captures the racial classifications of children before they are old enough to have a say in classifying themselves. Also, unlike with census data, we know which family member is choosing the racial categories for the family in the ECLS-B.

We find that 9 percent of 9-month olds are described as being a race (or racial combination) that does not match the racial categories reported for their parents. More than three-quarters of the inconsistencies involve a simplification — where the child is "missing" a racial category that is present in one or both of the parents. Among these simplifications, we find the most common racial category to be dropped is "white." We then go on to consider family characteristics that might predict the occurrence of an inconsistency, such as parent's education, country of origin, region of residence and the sex of the child.

In terms of identifying possible causal mechanisms, we argue – much like Lieberson and Waters (1993) did in their study of ethnic classification inconsistency among white American families — that these within-family racial classification inconsistencies are a substantively interesting sociological phenomenon of racial formation and the intergenerational transmission of racial identity, and not simply measurement error or methodological artifacts. Further research that focuses on structural characteristics affecting families' racial identity choices, instead of the characteristics of individual families that we study here, may provide additional context for, or better explanation of, these classification decisions.

Why do inconsistencies matter?

Racial classification inconsistencies between parents and children are worthy of study for several reasons: they have both methodological and substantive implications for social scientists, as well as important implications for the identities and future classifications of the children themselves.

The Office of Management and Budget describes its officially sanctioned racial categories as referring to "having origins in the original peoples" of various continents (OMB 1997). This implies a definition of race that is based on geography and descent: where your ancestors came from determines what your racial classification should be. If that is what is meant to be captured in the racial data used to compile government statistics, then a significant amount of within-family racial classification inconsistency would indicate a flawed or "noisy" measure of the underlying phenomenon. Of course, with a characteristic such as race that has been shown to vary in definition over time and by place, even within a single society, most social scientists expect a little "slippage" here and there. When it becomes particularly problematic is when population estimates for specific groups vary significantly from survey to survey or between observed and expected frequencies (e.g., Hahn et al. 1992). This affects not only the reliability of population projections that use racial categories, it also has the potential — if the inconsistencies are patterned according to other individual characteristics of interest (such as gender, education and nativity) — to bias the results of multivariate survey research. For example, if a study suggested that highly educated people are more likely to report multiple races, or to be

interracially married, that would be only part of the story if it turned out that less-educated people had a propensity to simplify their racial ancestry (and/or those of their children).

Our evidence on the potential for measurement error introduced by within-family racial classification inconsistency is mixed. The impact on population projections for the major monoracial categories, which make up the largest proportion of the population, would likely be minimal. However, this is in part because in the aggregate individuals with additions and simplifications partially cancel each other out. We will go into more detail on these measurement issues in the discussion of our results below.

Inconsistent racial classifications also provide a window into the world of racial formation – how racial categories are created, deployed and eliminated. As Lieberson (1985) argued regarding white ethnic groups, the inconsistencies in reporting that may make other analyses messy are data worthy of analysis by themselves because in the fluctuations, the appearance and disappearance of group identities is captured. Inconsistencies between the racial classifications of parents and their children are particularly interesting, then, because of what they imply about what race means to individuals; how they define race and use it in their everyday lives.

The meaning and consequences of race in American society are hotly debated, and racial classification lies at the center of those debates (Omi 2001). Despite the general consensus among social scientists that racial divisions vary across time and place, both reflecting and maintaining the distribution of power in society (e.g., ASA 2003), definitions of race as being inherited, genetic and ascribed at birth still hold sway in many circles. Some argue that biological perspectives on race are experiencing resurgence in the academy and are being reinforced among the public by recent technological developments associated with studies of the human genome, and practical application of DNA mapping in medicine and criminal justice (e.g., Duster 2003a). We expect to find, based on previous research (e.g., Roth 2005; Xie and Goyette 1997), that parents make active decisions about the racial classifications of their children that do not follow from a biological notion of race, though the percentage of parents who do so is likely small. Given the current climate, as well as the nudge in the direction of reporting the exact combination of the parental races provided by the question instructions, the classification inconsistencies that do exist are likely particularly “robust” in terms of representing substantively interesting decisions that challenge biological notions of race.

Finally, because the racial classification inconsistencies are among 9-month-old children, they are a very early look at the process of identity transmission in families. Early racial classifications of children by their parents are likely to have a lasting effect, shaping both their experiences within mainstream institutions (e.g., schools), as well as their own personal racial identifications (Funderburg 1994; Roth 2005). Many scholars argue that racial identities in the U.S. have been fundamentally altered by the increases in intermarriage and immigration over the past several decades (e.g., Harris and Sim 2002; Omi 2001). If so, then the racial classifications of these children, the youngest cohort of Americans, are glimpse into the future of race in the United States.

Why might inconsistencies occur?

There are several perspectives from which to explain the presence of within-family inconsistencies in racial reporting. For the sake of discussion, we label them "measurement error," "conscious choice," and "social constraint," though there is certainly some overlap among perspectives, and one or more may be operating at any given time.[1] We explore each set of explanations in turn.

Measurement error. The ECLS-B data we use comes from an in-person interview with the 9-month-old's primary caregiver. As such, it is subject to the usual problems of survey research, including question context effects, interview context effects and respondent comprehension and cooperation. Of these, a lack of comprehension is the most likely source of inconsistent responses related to our study. Does the respondent understand what the race and Hispanic origin questions are asking? Does the respondent understand that multiple responses are acceptable? Do the listed racial categories represent meaningful distinctions or groups to the respondent?

Characteristics that are likely proxies for respondent comprehension are: respondents' education, respondents' English language proficiency and country of origin. Lieberson and Waters (1993) note that respondents with low levels of education are more likely to give "don't

[1] For example, "conscious choices" and "social constraints" may contribute to "measurement error" in the sense that they obscure the "true" answer (or the true range of answers) to a given question. What we mean by measurement error in this section, and throughout the paper, is not any inconsistent or "incorrect" response, but those that were unintended because they are a product of the specific survey design, our methodology or survey research generally.

know" answers and to be generally less "savvy" about responding to surveys. Also, in their study of ethnic ancestry reporting among whites, they find that respondents' education is positively associated with reporting multiple ethnic ancestries. Goldstein and Morning (2000) find the same relationship in the case of multiple race reporting. While this could be an artifact, to the extent that highly educated people are more likely to be intermarried (Qian 1997), it may also reflect differences in the knowledge of (or the desire to maintain) family ancestral histories and/or a more complex notion of "race."[2] Regarding English proficiency, the ECLS-B interview was available in both English and Spanish, and, if necessary, an interpreter was used. For this reason, the lack of comprehension resulting from low levels of English proficiency should be greatly minimized. However, the lack of comprehension resulting from racial categories that do not represent meaningful distinctions would remain. Numerous studies have shown that the names of racial categories and the "rules" for inclusion in one category or another vary across societies (e.g., Davis 2001). For example, among Dominicans it is not unusual for parents and children to be described as being different "races" because their physical features — skin color, eye color, hair type — are not identical (Rodriguez 2000).

Other measurement related explanations for within-family racial classification inconsistency include: the presence of nonbiological parents or caregivers, "accounting" errors related to keeping track of many multiple ancestries and the presence of "outliers" – in this case respondents who provide inconsistent responses because they do not take the survey seriously.[3] We assume that some inconsistent responses should be expected because of a lack of cooperation by the respondent (or simple coding errors), but that, by definition, these "outliers" should not make up more than a trivial proportion of any sample. We describe how we minimized the impact of the former two concerns in our discussion of methods, below.

Conscious choices. Of course, the respondents' racial classifications of themselves and their children require more context than the features and limitations of survey design and

[2] The former would not affect our study, assuming that the respondent's knowledge of multiple ancestries (or lack thereof) would mean they also reported (or did not report) multiple ancestries for their child. The latter relationship would affect our results if, for example, more highly educated respondents are less likely to subscribe to a definition of race based on hypodescent.

[3] Respondents who are "non-cooperative" in the sense of giving nontraditional responses to the race and Hispanic origin questions are not a source of bias as long as they are consistent in their non-cooperation or rejection of contemporary notions of race (e.g., by reporting "Human" as both their race and the race of their child or by refusing to answer the questions at all). That leaves only respondents who are supplying "random" answers, like students making repeated patterns on multiple choices tests, and they are included in the measurement error of all survey research.

implementation. Within-family racial classification inconsistency also speaks to the nature and maintenance of racial hierarchies in the United States. These political processes of "racial formation" (Omi and Winant 1994) are partly defined and constrained on a macro-level by which categories are officially sanctioned or socially acceptable for a given individual to claim. (We will discuss these "constraints" in more detail in the following section.) But individuals also buy into and reproduce these hierarchies in their own identities and racial classification decisions. There are "choices" within the social constraints, and the benefits do not function entirely at the level of individual self-esteem or cultural belonging: there are material advantages to claiming one racial group over another (Espiritu 1992). Americans have been shown to be strategic in their use of racial or ethnic identities, whether in pursuit of political clout, citizenship rights and economic advantages (Almaguer 1994; Davis 2001; Lopez 1996) or for more symbolic, social reasons (Waters 1990). On the one hand, claiming a minority identity may open access to resources, such as through affirmative action policies, or tribal treaties. This might lead parents to report only one racial category for their children despite their knowledge of other options. On the other hand, scholars have argued that "whiteness" comes with numerous political and economic privileges (Lipsitz 1995; Roediger 1991), which might lead parents to try to "pass" their children from a disadvantaged group into a more advantaged one.

With our data, we will not be able to identify directly which of these considerations (if any) affected the respondents' racial classification decisions, but our analyses may provide indirect support for one argument or the other. Empirically, in the context of our study, the pro-minority choice would be represented by an over-estimate of monoracial nonwhite 9-month olds, particularly blacks, Latinos and American Indians, due to simplifications from the combination of their parents' races (at least one of whom was reported as "white"). The pro-white choice would be represented by an over-estimate of monoracial white 9-month olds, also due to simplifications when at least one of the parents was reported as nonwhite (or multiracial).

However, simplifications are not the only cause of within-family classification inconsistency. As Roth (2005) shows in her study of the racial classification of children of white and black parents, 10 percent these children were classified as "Other" in the 2000 Census. Even though multiple race reporting was allowed, these children were not given the exact combination of their parents' races, nor were they given the race of only one parent. Roth (2005) argues that this choice should be interpreted as reflecting a specific kind of "interracial identity," such as

"mixed," that is distinct from the choice of listing both races separately. Her argument is consistent with the history of the movement to acknowledge multiraciality in government statistics. It was parents of black-white biracial children who led the charge, and who initially requested a "multiracial" or "mixed race" category to be added—not the "mark one or more races" solution that was eventually adopted (DaCosta 2000).[4] In the context of our study, choices such as this represent a simplification (because the child was not described as one or more of the parents' races) *and* an addition (because the child was given a race with which neither of the parents were described).[5]

Social constraints. Unfortunately, many of the mechanisms discussed in this section will not — or cannot — be addressed, even indirectly, in the analysis that follows. However, they are worth elucidating in some detail because they represent directions of future research as well as other interpretations of our findings.

One of the most consistent findings in the racial classification inconsistency literature is that social context matters — that there are unspoken "rules" (and sometimes clearly articulated ones) which govern the transmission of ethnic and racial identities. For example, white children are more likely to be given the ethnic identity of their father than their mother (Lieberson and Waters 1993). Biracial Asian children are also more likely to be labeled with the race of their father (e.g., Xie and Goyette 1997).[6] It is often assumed that this occurs either because the child also possesses the father's surname (which may signal an ethnic or racial identity) or because of patriarchal family norms. However, differential transmission of identity between the father and mother could also be the result of who is reporting the ethnicities or races of the various family members. Studies that use census data (e.g., Roth 2005; Xie and Goyette 1997) cannot identify who the primary respondent was. In the ECLS-B, more than 99 percent of the 9-month interview respondents were the child's biological mother. If respondents tend to favor their own race when reporting the race of their child, then there should be fewer inconsistencies between mothers and

[4] Roth's interpretation of the "Other" identity choice is also consistent with the keystone of the literature on intersectionality: that being a black woman, for example, is not the same as being black + woman; the combination leads to entirely different life experiences (e.g., Collins 2000).

[5] However, we do not double count these inconsistencies, which might better be labeled "substitutions," in the analyses below because our measure of total inconsistent cases is defined as inconsistencies of either type. And though we do not report or analyze them separately, the racial classifications of about 2 percent of the children in the sample were of this simplification and addition (or substitution) variety.

[6] It is important to note that the findings for biracial Asian children were in the context of single race reporting.

their children in our data. If instead the 9-month olds are more likely to match their fathers, then that would provide indirect support for either the surname or patriarchal norm explanations.

The most infamous of these descent rules is, of course, the "one-drop rule," by which a person with any known black ancestry, no matter how far removed, is classified as racially black. The rule was codified in state miscegenation statues starting in the late-19th century (Jenks 1916) and in the U.S. Census by 1930 (Nobles 2000). It was upheld by the U.S. Supreme Court as recently as 1988 (Davis 2001), though there is some evidence that its influence as a guideline for the racial classification of biracial black children has declined (Roth 2005).

The "one-drop" or hypodescent rule for defining one's race is unique not only to the United States (Davis 2001), but peculiar to the classification of African Americans (Wacquant 1997). Even in the U.S., other racial groups are not held to this standard. For example, American Indian heritage has long been defined by hyperdescent, where a person's American Indian ancestry could be several generations removed, but he or she could still be a legal member of the given tribe. Asians also have been shown to have (or take advantage of) more options when it comes to classifying their biracial children (Xie and Goyette 1997), and the racial and ethnic identities of Latinos are notoriously complex (e.g., Rodriguez 2000).

Of course, because an individual's full and exact ancestries are not instantly apparent, many of these descent rules depend on physical cues. People who do not fit the socially expected physical profile of a racial group may find their identity "corrected" by others. To the extent that a child's phenotype does not match that of his or her parents, racial classification inconsistency may be more likely (because it opens up racial options that may not be available to the parents, or closes others down). The ECLS-B does not include any measures of either the parents' or the child's skin color, or other physical characteristics, and thus we cannot address this explanation in our analysis.

The strength of these racialized descent rules would be supported in our analyses, in part, by different rates of classification inconsistency across racial groups. For example, children with one black parent may be more likely to have inconsistent racial classifications than other groups because the child's race was simplified in line with the "one-drop rule." Other studies have operationalized the impact of societal expectations using the prevalence of the given racial identity in the respondent's neighborhood (or metropolitan statistical area). For example, Harris and Sim (2002) find that multiracial Asian teens are more likely to choose "white" as the race

that best describes them as the proportion of whites in their community increases, while Xie and Goyette (1997) find that multiracial Asian children are more likely to be classified as Asian by their parents as the proportion of Asians in their community increases. We include region in our analyses in an attempt to account for some of these structural context effects, but the finer details of local racial composition are beyond the scope of this study.

Data and Methods

The ECLS-B is a nationally representative sample of children born in 2001 whose birth certificates were registered with the National Center for Health Statistics. Children whose mothers were under the age of 15 were excluded, as were children who died, or were adopted, before 9 months. In addition to information gleaned from the child's birth certificate, after 9 months detailed information on the parents' backgrounds, the child's health and the home environment were obtained during a home visit that included a computer-assisted interview with the child's primary caregiver. This first wave yielded 10,688 cases: an overall response rate of 74% from a clustered sample of more than 14,000 birth certificates.

Though the survey is intended for studies of early childhood development and early educational experiences, it includes oversamples of American Indian, Chinese and other Asian/Pacific Islander children, as well as multiple measures of race and Hispanic origin, which makes it particularly useful for our purposes.

Measures of Race. As noted above, in our comparisons we use the primary caregiver's self-reported race and Hispanic origin (again, this is almost exclusively the biological mother), and the primary care giver's report of both her spouse's and the child's race and Hispanic origin. The parents' race and Hispanic origin as reported on the child's birth certificate is also available in the ECLS-B data. Though inconsistencies did exist between the parents' race and Hispanic origin as listed on the child's birth certificate and the parents' classifications obtained by ECLS-B interviewers nine months later, we chose to focus on inconsistency between the parents and the child in order to get an early look at how race is "inherited' or passed on in families. We also chose to match the child's race and Hispanic origin to the parents' 9-month interview reports, rather than the birth certificate information, for methodological reasons. Guidelines for data collection on birth certificates vary by state, as well as by hospital, and it is not clear whether the

parents' race and Hispanic origin were established by self-report or by observation — likely it was some combination of the two (Baumeister et al. 2000). In addition, the birth certificate data is based on single-race classification, while the 9-month reports allow for multiple answers to the race and ethnicity items for both parents and children.

With the exception of allowing multiple responses to the "Spanish, Hispanic or Latino origin" question, the format of the ECLS-B questions follows the updated OMB Directive 15 conventions (OMB 1997) with categories that are identical to those used in the 2000 Census.

Treatment of racial categories. For the purpose of this study we employ a 19-category scheme of racial classification. The categories reflect all of the possible racial and ethnic responses that could have been chosen on the survey, including the various options for Hispanic origin. The "mark one or more races" format for both questions means that theoretically parents and children could have chosen all 19 categories. Because our goal is to let the data "speak for itself" as much as possible, we also do not construct mutually exclusive categories based on the most prevalent racial combinations. In order to make our findings comparable to other research in this area, we sometimes report results based on a more familiar seven-category scheme (i.e. white, Black, Latino, Asian, American Indian, Pacific Islander, and other race). But, whenever possible, we use the exact racial classifications provide by the parents in order to highlight what race means to them. In this way, we do not impose our own understanding of what constitutes a "race." Of course, the 19 options given on the survey arrived there through ongoing processes of political negotiation (Snipp 2003), and some parents responses to these fixed categories are likely different from what they would have answered given nothing but a blank space in which to list various racial ancestries or identities. However, given the available data, the 19-category scheme exhausts the information available regarding parental decisions about racial classification for themselves and their children.

In contrast to other studies of this nature (e.g., Harris and Sim 2002), this scheme also leaves Hispanic origin in our analysis and includes it not as modifier of the typical race categories (e.g., non-Hispanic white), but as an equivalent response. We believe the use of the "mark all that apply" format on both the race and Hispanic origin questions justifies this treatment, as Hispanic origin becomes just another possibility among the many "racial" options. Although surveys often separate race from Hispanic origin, as the ECLS-B does, many Latinos in America view their race as being "Latino" or "Hispanic" (Rodriguez 2000). At the same time,

in our formulation of the data, children and parents of Hispanic origin are automatically multiracial because the survey design forces them to choose a racial category in addition to identifying their Hispanic origin. Thus, the Hispanic identification of Latinos who chose the "another race" category will, in some sense, be "double counted." However, this "double-counting" does not hinder our ability to examine whether or not parents consistently identify themselves and their children (i.e., Latino parents who double-count themselves do not necessarily double-count their children).

Study samples. Our analysis focuses on comparisons between children and their biological parents because of our interest in the "inheritance" of race. Therefore, our study samples depend on the presence and availability of race data for biological parents. First, we dropped 83 cases in which the child was not living with either biological parent. Second, we eliminated 300 cases in which one of the biological parents was missing data on race, or the child was missing data on race. Subtracting these cases from the entire sample of 10,688 produced our primary analytic sample of 10,305 children who were living with at least one biological parent, and race data was complete for the entire family (we refer to this as the "all families" sample throughout the report). This sample includes 10,284 biological mothers and 8,056 biological fathers. Of the 10,305 children, 2,249 children live with their biological mother but not their biological father, and 21 children live with their biological father but not their biological mother. We also ran analyses on the sub-sample of children who live with both biological parents (we refer to this as the "two-parent families" sample throughout the report[7]) to minimize the influence of inconsistencies that could be attributed to measurement error or the influence of a nonbiological parent.

Descriptive statistics. Table 1 displays both a detailed and a summary distribution of racial categories for children and their parents in both samples. The top portion of the table lists each of the racial categories that were given as options in the ECLS-B interview, including those in the Hispanic origin question. The columns sum to more than 100 percent because multiple answers were accepted to both questions. Approximately, 29 percent of the children and 25 of the parents were identified as more than one race. This includes 24 percent of children and

[7] It should be noted that while the samples refer to the structure of the family, all of the analysis are conducted at the child level.

approximately 23 percent of their parents who were reported as being of one or more Hispanic origins.

The bottom portion of Table 1 summarizes the detailed distribution into the six monoracial categories that represent the OMB standard classifications, and the most common multiracial combinations. Of the ECLS-B children, 53 percent are monoracial white, 14 percent are monoracial black and nearly 3 percent are monoracial Asian. Comparing racial distributions across the two samples, the most significant difference is in the percentage of monoracial black mothers: 14 percent of all mothers are black, but just 7 percent of mothers in two-biological parent families are black. As a result, monoracial white and monoracial Asian mothers make up more of the two-parent family sample; the rest of the groups are relatively stable across samples.

Table 2 gives the full sample distribution of our independent variables. Here the notable difference between samples is in the distribution of mother's education. Fifty-seven percent of mothers in two-biological parent families attended some college, compared to 51 percent among all mothers. For the purposes of the analyses below, the most important thing to note is that approximately 30 percent of the children in either sample have parents who are either both monoracial but are married to someone of a different monoracial group, or at least one of whom was described as being more than one race. It is these children who are most "at risk" for racial classification inconsistency. While it is technically possible for a child of two monoracial in-married parents to have an inconsistency, as we will see, the proportion of such children that does is extremely small.

Defining Inconsistency. To identify racial classification inconsistencies between parents and their children we use dichotomous variables that represent whether (or not) each individual was described as being "white," "black," "Mexican," "Chinese," "Native Hawaiian," "American Indian," etc. We then compare the child to its biological parents on each of the 19 categories. As noted above, an inconsistency results when a parent was identified with a racial category but the child was not so described (a simplification), or when the child was identified with a racial category that was not present for one of the parents (an addition). We chose to compare the children to their parents on the detailed categories instead of a more common summary scheme (white, black, American Indian, Asian, Pacific Islander and Other) — in addition to the reasons for using the full 19 categories noted above — because umbrella categories would underestimate the number of inconsistencies that arose when the family chose from the full set of racial options.

For example, in the summary scheme, the difference between a family with two Korean parents and a Korean child and a family with one Korean parent, a Vietnamese parent and a Vietnamese child would be lost.[8]

Logistic regressions. In addition to providing descriptive results on the extent and types of inconsistency, we also use logistic regression models to examine the relationship between key independent variables and the likelihood of an inconsistency. For the purposes of comparison, we run models for both samples (all families and two-parent families). In each of these models, our dependent variable is coded 1 if the child's racial classification is inconsistent with the categories reported for its parents, and 0 if it is not. Along with dummy variables representing the child's gender, the family type (in models for the all families sample only), the mother's education, the mother's country of origin and the family's region of residence, as listed in Table 2 and 3, we include continuous variables for the mother's age (centered on 28 years, the mean for the sample), the total number of parental race categories (centered on 1), and the total number of parental races squared. In some of the models, we also include dummy variables for reporting a Hispanic origin, for six "umbrella" racial categories and 18 detailed racial categories. Because our coding of race is not mutually exclusive, the interpretation of these variables differs slightly from typical analyses that use race as an independent variable. We will discuss these differences in interpretation in more detail when we present our multivariate results below.

The inconsistencies: how many and what type?

In the sections that follow, we address four questions about the extent and nature of within-family racial classification inconsistency: How much inconsistent racial reporting exists? What types of inconsistency are most common? When an inconsistency occurs, which racial categories are most likely to get dropped or added? And which characteristics of the family are the best predictors of inconsistent racial classification between parents and their newborns?

Table 3 details the extent of within-family racial classification inconsistency in our study sample. Looking at the top row of totals, we see that in 9 percent of the more than 10,000 cases in the all families sample, the racial categories reported for the 9-month old were inconsistent

[8] We did do separate calculations for simplification only using the seven-category scheme. In those, the percent of children with an inconsistent racial classification was 6.7 percent compared to the 7.2 percent we find using the full slate of categories.

with those reported for at least one of the parents (fifth column from the left). Seven percent of these inconsistencies are simplifications and four percent are additions. The total noted above is lower than the sum of those two percentages because some children have both a simplification and an addition (e.g., they lost one category but gained another). In the two-parent-family sample, the percent of children who have at least one inconsistent racial category is lower than the total for all families. We will discuss the reason why in more detail below.

Simplifications. Five percent of mother-child comparisons result in simplifications, slightly more than the 4 percent found by comparing (the smaller sample of) fathers and their children. The parent-gender inconsistency gap among two-parent families (columns 6 and 7) is similar in size to that found in all families, and is statistically significant.[9] Rejecting the hypothesis that children are more likely to match the parent who is doing the classifying (i.e., the mother) lends indirect support to the explanations noted above regarding patriarchal family norms and the father's surname as an ethnoracial marker; even though the mothers have the opportunity to ensure that their children's racial classification are consistent with their own, their reports are more likely to favor the child's father.

The most striking of the observed frequencies in Table 3 is the 31 percent of children who live with only their biological father but do not match his racial classification. Recall, however, that there are just 21 cases of children who live with only their biological father, so while the percentage of inconsistencies is remarkably high for this group, the actual number of inconsistencies contributed toward the full-sample totals is very small.

Comparing the high and low ends of the educational distribution, it appears that children of mothers with the most education are the least likely to have simplified ancestries while children of the least educated mothers are the most likely. This would be consistent with the assumption that survey savviness increases as education increases. However, the relationship between mother's education and inconsistency is not always monotonic and negative; children of mothers with "some college" education are more likely to mismatch (their mothers in particular) than children of mothers who only graduated from high school.

A higher percentage of children with foreign-born mothers have a simplified ancestry compared to children with native-born mothers (11 percent vs. 6 percent; see columns 3 and 8),

[9] Based on a one-tailed, one-sample t-test comparing the two means ($p<.05$), where H_1: mothers will match more than fathers because they reported the classifications and H_0: mothers' inconsistency will be equal to or greater than the fathers'.

as expected given that definitions of race vary across countries. Similarly, simplifications are more common on along the coasts — in the Northeast and West — where immigrants and multiracial Americans make up larger proportions of the population (Jones and Smith 2001). Simplifications also increase dramatically as the number of parental races increases.

Additions. Nearly 4 percent of the 9-month olds in the ECLS-B sample are identified as having a racial ancestry that was not mentioned by either parent (column 4). These "additions" are patterned similarly to the simplifications described above, with two exceptions: male and female children are almost equally likely to have an addition, and the percent of children with an addition who live with one biological parent is three times that of children who live with both their biological parents (column 4 vs. column 9). This is not surprising because the majority of the inconsistent single-parent children are likely being described with a racial category that matches their nonresident biological parent — though that is purely speculative because the data do not include racial classifications for the nonresident parent.

Categories dropped or added. Table 4 shows the percent of inconsistencies that involve dropping or adding a given racial category. The racial ancestries that are being dropped most often are: white (32 percent), other Hispanic (19 percent), another race (21 percent) and American Indian (12 percent). Mexican is also among the top five simplifications at 9 percent, but only among mothers. Meanwhile, black racial ancestry is dropped in nearly 10 percent of the simplified cases among fathers. The patterns for dropped categories are similar across the two samples.

Among all families, the racial categories that are most often added are: black (23 percent), Mexican (22 percent), another race (16 percent), white (15 percent) and Puerto Rican (nine percent). As noted above, the patterns for additions are markedly different between the two samples. In two-parent families, where additions are much less common overall, the top additions are: another race (29 percent), other Hispanic (12 percent), black, Mexican and white (approximately 10 percent each).

Comparing simplifications and additions, among all families, "black" and "Mexican" are added in more cases than they are dropped, while for "white" and "American Indian" the opposite occurs. These patterns do not support the idea that anyone who can claim white ancestry will, contrary to many of the assumptions of the scholarly literature on whiteness (e.g., Lipsitz 1995; Roediger 1991). Instead, these within-family classification inconsistencies are generally in

the nonwhite or pro-minority identity direction. This could be either because some minority identities can be "beneficial" in the sense of being able to access resources through affirmative action policies, or perhaps because — as has often been noted anecdotally — some whites feel as if they lack a "culture" or "tribe" (e.g., Daly 2005) and may want their children to have an identity that comes with a sense of solidarity or belonging.

What predicts the presence of inconsistency?

We started our regression analysis by looking at bivariate relationships with classification consistency for each of the covariates listed in Table 3 (results not shown). With respect to simplified ancestries, the bivariate results largely substantiated the observed patterns described above. There were two exceptions: there is not a significant difference between newborn boys and girls in the probability of having a simplified ancestry; there is also no difference between children living with one or both parents. In addition, the bivariate models indicated that older mothers are less likely than younger mothers to simplify their child's ancestry, and multiracial parents are more likely to simplify the racial classification of their child.

For predicting an addition, the bivariate results were similar to those for simplifications only. The one exception was that children who live with only one parent are significantly more likely than children who live with both parents to have either a simplified or an added racial ancestry. Because we suspect that this is driven by the "additions" of ancestries from the non-resident parent, and because the relationships between the covariates are otherwise similar, we will present and discuss only the multivariate models predicting simplifications here.[10]

We estimate the same five models for both of our samples. Model 1 includes the basic set of background variables. Model 2 attempts to control for "accounting errors" by introducing a count variable for the number of racial categories identified among the parents, as well as a variable for the same count squared to test nonlinearity. Model 3 includes a variable that identifies children who have at least one Latino parent to control for the fact that Latinos are effectively "double counted." Models 4 and 5 include dummy variables for the remaining racial groups in an attempt to understand which racial groups are most likely to have parent-child

[10] The all families and two-parent families multivariate models for additions are available from the authors upon request.

inconsistencies. Model 4 includes dummy variables for Black, American Indian, Asian, Pacific Islander, and other race. Model 5 includes the full set of 18 dummy variables for the groups in the 19-category scheme, leaving whites as the reference group. In each of these models, the coefficients represent the log odds of racial classification inconsistency for a child with the named characteristic.

All families. Most of the action in these models occurs between Model 1 and Model 2 (see Table 5a). As we see from comparing column 1 and column 2, the inclusion of the count variables for the number of parental races "explains away" all the previously statistically significant effects from the other independent variables, and flips the predicted direction of the effect of having a foreign-born mother from increasing classification inconsistency to decreasing it. This suggests that children with foreign-born mothers only have inconsistent ancestries if their mother (or father) is also multiracial. Children with monoracial foreign-born mothers are actually significantly less likely to have a simplified ancestry than their cohort-mates with otherwise similar native-born mothers.

The parental race count variable is centered on one, so its coefficient (in column 2, 4.598 — minus the coefficient on the squared term) can be interpreted as the increase in the log odds of racial classification inconsistency of adding one parental racial category (i.e., moving from a child with monoracial in-married parents to a child with either monoracial intermarried parents or at least one multiracial parent). This suggests that racial classification increases in a linear fashion as the number of parental racial categories increases, supporting a measurement error hypothesis that inconsistency among multiracial Americans is due "accounting errors." We include the squared count variable to further test this explanation.[11] Its coefficient is negative, which slows the rate of increase in inconsistency from the linear term until it flattens out and eventually reverses.[12] This suggests, then, that it is not an increase in the number of parental races *per se* that is the cause of racial classification inconsistency.

In Model 3, we add a dummy variable for having at least one parent of Hispanic origin to verify that our coding scheme does not artificially inflate the number of classification

[11] We tested each new group of variables, including this one, using a Wald test to verify that their joint effect was statistically significant and that their inclusion improved the explanatory power of the model.

[12] In more concrete terms, somewhere between six and seven parental races, the log odds of racial classification inconsistency become zero for the two count variables. So the model predicts that children of parents who are described by seven racial categories (combined) are actually less likely to have a classification inconsistency than the children of monoracial in-married parents.

inconsistencies. The negative coefficient for Hispanic in column 3 suggests that it does not. At each value on the parental race count variable, parents of Hispanic origin are actually less likely than non-Hispanic parents to classify their children in an inconsistent way.

Model 4 adds dummy variables for the five other racial umbrella categories. Because the categories are not mutually exclusive, they should be interpreted as the log odds of racial classification inconsistency for a child whose parents mentioned a category in the given umbrella group. Thus, the constant in this model (and the next one) refers to the child of parents (or a parent) of one race who did not mention any of the given racial categories (i.e., who mentioned only white).[13] This model provides further confirmation that the unique nature of racial identities among Hispanics does not explain the presence of racial classification inconsistency. The coefficient for parents who mention "another race" as one of their categories is positive, but the coefficient for parents who mention a Hispanic origin remains negative (and increases slightly). This suggests that Latino parents who do not choose any of the traditional racial categories, but choose "other" in answer to the race question instead (as nearly half of all Latinos do), are more likely to describe their children in a consistent way than non-Hispanic white and multiracial parents are to describe their children consistently.

Lastly, Model 5 indicates that the decreased likelihood of within-family racial classification inconsistency in Models 3 and 4 holds across the various Hispanic origin groups. The four coefficients for Mexican, Puerto Rican, Cuban and Other Hispanic are all negative, and three are statistically significant.

Two-parent families. The results for two-parent families in Table 5b are substantively similar to those found for all families, until Model 4. In that model, the coefficient for having at least one Asian parent is statistically significant (column 4) and indicates that children of Asian parents are less likely than children of white parents to have a racial classification inconsistency. Model 5 demonstrates the utility of using the full range of responses by showing that within the Asian umbrella category only Filipino and Korean mothers are significantly less likely to simplify their child's ancestry than white mothers. The coefficients for having a Black parent and an American Indian parent also become statistically significant in this model. Taken together, all 18 coefficients suggest that only one group of children (i.e., those of parents who identify with

[13] The full description of the reference group whose log odds of racial classification inconsistency are captured by the constant is: female children of 28-year-old, native-born, monoracial white mothers who have a high school degree, and are married to the child's monoracial white biological father.

"another race") is more likely to have a "missing" racial ancestry than the children of white parents.

Conclusions

This study provides suggestive evidence that early racial classifications of children evolve out of social processes and are not merely the result of parents treating racial identities as inherited or transmitted as if they were biological traits. We show that 9 percent of nine-month old children are classified by their mothers in ways that are inconsistent with the racial classifications of the parents. Most of the inconsistencies are simplifications in which the mothers leave out one of the parental races when racially classifying the child. Among these, the mothers were more likely to leave out their own racial identity than the racial identity of the child's father, which is consistent with previous research on the patriarchal transmission of ethnic identities. A smaller percentage of children (4 percent) have racial classifications that are not consistent with either biological parent; that is, inconsistencies that are "additions." We speculate that these racial additions result from single parents reporting the racial identity of the absent biological parent.

Further, we argue that the weight of our evidence falls in favor of explaining the inconsistencies as parents making active decisions about the racial classification of their children, and not the result of measurement error or other methodological artifacts. Mothers with the lowest levels of education are not more likely, on average, to report their family's racial classifications inconsistently. And mothers who were born outside of the United States are actually less likely than otherwise similar native-born mothers to simplify their child's racial ancestry. On the other hand, the likelihood of having a racial inconsistency does increase as the number of races among the child's biological parents increases. This suggests that racial inconsistencies may in fact be due to "accounting errors," in which inconsistencies are merely a reflection of having to deal with more races and more decisions. However, the effect of additional parental races tapers off as the number of parental races increases, which suggests that increasing the number of races in the parental pool indefinitely will not lead to continually increasing inconsistency.

From a standpoint of quantifying the potential measurement error resulting from employing the inconsistent classification in other analyses, our evidence is mixed. The percentage of children whose race is not consistent with that of their parents is nontrivial, but the dangers of using parents' race to impute the race of their children are limited, as might be expected, to children of intermarried parents and children of multiracial parents. Though the numbers of both types of children are increasing, they remain a small proportion of all children in the U.S. Over- or underestimates in the racial distribution of 9-month olds that result from within-family classification inconsistencies are also small, no greater than 3 percent (see Figure 1). However, this occurs, in part, because some of the various simplifications and additions that were described in Table 4 cancel each other out in the aggregate.

Substantively, the results suggest that families in which at least one of the parents has a white racial identity are particularly likely to have a parent-child racial inconsistency. Among the cases where children were given a simplified racial classification, the white racial identity was the most likely to be left out. Of course, this is to be expected given that whites are by far the largest of the 19 racial groups. But the multivariate results suggest that it is not merely due to group size, and that parents with multiple races are more likely to simplify if one of the multiple races is white. Figure 2 illustrates the probability of a simplification inconsistency for selected combinations of racial identities among families where there were exactly two parental races, based on predicted probabilities from the results in Table 5a, column 5. The figure shows that in general, parental combinations with a white racial identity are more likely than those without a white identity to have a racial inconsistency. Interpreting this finding is a difficult matter. On one hand, it could suggest that having a white racial identity is associated with a greater likelihood or ability to exercise racial options. This would be consistent with theories of symbolic ethnicity (Gans 1979; Waters 1990), where whites have "ethnic options" that are not extended to nonwhite groups. On the other hand, it could suggest that racial minority identities are "sticky" in a way that is similar to the rule of hypodescent; that is, minority identities are canceling out white racial identities. This would speak to the persistence of a white/nonwhite divide and not a shift to the black/nonblack divide some have predicted (Gans 1999). Of course, these processes may also be operating simultaneously.

The evidence presented here does not provide enough information to adjudicate between these group-specific causal mechanisms. What we do show is that within-family racial

classification inconsistencies still exist and are non-trivial, even after the shift to multiple-race reporting. In order to better understand the social processes underlying these racial inconsistencies, further research is needed on their relationship to specific combinations of parental races. That is, which races are being dropped in the simplification by which parental pairings (e.g. black and white, white and Mexican, white and Chinese)? In our own research, preliminary analyses along these lines suggest that the gendered nature of racial combinations is particularly important. For example, black mothers and white fathers simplify their child's race to black more often than do white mothers and black fathers. In addition, it would be useful to examine the structural and contextual factors that are associated with racial inconsistencies. Here, we examined geographic region, which had little impact on classification inconsistency once other variables were taken into account. But there is a host of other factors that are likely to be associated with parent-child racial inconsistencies, such as the local racial composition, neighborhood affluence and institutional makeup of the surrounding community. Pursuing these potential predictors of parent-child racial inconsistencies would deepen our understanding of the process of racial classification in American families.

References

Almaguer, Tomas. 1994. *Racial Fault Lines: The Historical Origins of White Supremacy in California*. University of California Press.

American Sociological Association. 2003. *The Importance of Collecting Data and Doing Social Scientific Research on Race.* American Sociological Association.

Baumeister, L., K. Marchi, M. Pearl, R. Williams, and P. Braveman. 2000. "The validity of information on "race" and "Hispanic ethnicity" in California birth certificate data." *Health Services Research* 35(4):869-883.

Collins, Patricia Hill. 2000. *Black Feminist Thought: Knowledge, Consciousness and the Politics of Empowerment, 2nd Edition.* New York: Routledge.

DaCosta, Kimberly. 2000. *Remaking the Color Line: Social Bases and Implications of the Multiracial Movement.* Dissertation, UC Berkeley.

Daly, Emma. 2005. "DNA Tells Students They Aren't Who They Thought." *New York Times*, April 30.

Davis, F. James. 2001. *Who is Black?: One Nation's Definition.* Pennsylvania State University Press.

Duster, Troy. 2003. *Backdoor To Eugenics*. Routledge.

Espiritu, Yen Le. 1992. *Asian American Panethnicity: Bridging Institutions and Identities*. Temple University Press.

Funderburg, Lise. 1994. *Black, White, Other: Biracial Americans Talk about Race and Identity.* New York: William Morrow and Company, Inc.

Gans, Herbert. 1999. "The Possibility of a New Racial Hierarchy in the 21st Century United States." In *The Cultural Territories of Race: Black and White Boundaries*, edited by Michele Lamont. University of Chicago Press.

_____ 1979. "Symbolic Ethnicity: The Future of Ethnic Groups and Cultures in America." *Ethnic and Racial Studies* 2: 1-20.

Goldstein, Joshua R. and Ann J. Morning. 2000. "The Multiple-Race Population of the United States: Issues and Estimates." *Proceedings of the National Academy of Sciences* 97: 6230-6235.

Hahn, R.A., J. Mulinare, and S.M. Teutsch. 1992. "Inconsistencies in Coding of Race and Ethnicity between Birth and Death in US Infants: A New Look at Infant Mortality, 1983 through 1985." *Journal of the American Medical Association* 267:259-63.

_____ and Jeremiah Joseph Sim. 2002. "Who is Multiracial? Assessing the Complexity of Lived Race." *American Sociological Review* 67: 614-627.

Hirschman, Charles. 2004. "The Origins and Demise of the Concept of Race." *Population and Development Review* 30: 385-415.

Jacobson, Matthew Frye. 1998. *Whiteness of a Different Color: European Immigrants and the Alchemy of Race.* Harvard University Press.

Jenks, Albert E. 1916. "The Legal Status of Negro-White Amalgamation in the United States" *The American Journal of Sociology* 21: 666-678.

Jones, Nicholas A., and Amy Symens Smith. 2001. “The Two or More Races Population: 2000.” *Census 2000 Brief*. U.S. Census Bureau.

Kalmijn, Matthias. 1998. “Intermarriage and Homogamy: Causes, Patterns and Trends.” *Annual Review of Sociology* 24:395-421.

Lieberson, Stanley and Mary C. Waters. 1993. "The Ethnic Responses of Whites - What Causes Their Instability, Simplification, and Inconsistency." *Social Forces* 72:421-450.

Lieberson, Stanley. 1985. “Unhyphenated Whites in the United States.” *Ethnic and Racial Studies* 8: 159-180.

Lipsitz, George. 1995. “The Possessive Investment in Whiteness.” *American Quarterly* 47: 369-95.

Lopez, Ian F. Haney. 1996. *White by Law: The Legal Construction of Race*. New York University Press.

Nobles, Melissa. 2000. *Shades of Citizenship: Race and the Census in Modern Politics*. Stanford University Press.

Office of Management and Budget. 1997. “Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.” *Federal Register* Notice.

Omi, Michael. 2001. “The Changing Meaning of Race.” In *America Becoming: Racial Trends and Their Consequences*, eds. Neil J. Smelser, William Julius Wilson and Faith Mitchell. National Academy Press.

_____ and Howard Winant. 1994. *Racial Formation in the United States: from the 1960s to the 1990s.* Routledge.

Qian, Zhenchao. 1997. “Breaking the Racial Barriers: Variations in Interracial Marriage Between 1980 and 1990.” *Demography* 34: 263-276.

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

Roediger, David. 1991. *The Wages of Whiteness*. Verso.

Roth, Wendy. 2005. “The End of the One-Drop Rule? Labeling of Multiracial Children in Black Intermarriages.” *Sociological Forum* 20: 35-67.

Snipp, C. Matthew. 2003. “Racial Measurement in the American Census: Past Practices and Implications for the Future.” *Annual Review of Sociology* 29: 563-88.

Van Ausdale, Debra and Joe R. Feagin. 1996. “Using Racial and Ethnic Concepts: The Critical Case of Very Young Children.” *American Sociological Review* 61: 779-793.

Wacquant, Loic. 1997. "For an Analytic of Racial Domination." *Political Power and Social Theory* 11: 221-234.

Waters, Mary. 1990. *Ethnic Options: Choosing Identities in America*. University of California Press.

Williamson, Joel. 1995. *New People: Miscegenation and Mulattoes in the United States*. Louisiana State University Press.

Xie, Yu and Kimberly Goyette. 1997. “The Racial identification of Biracial Children with One Asian Parent: Evidence from the 1990 Census.” *Social Forces* 76: 547-70.

Table 1. Parent-reported racial classifications of 2001 newborn children and their parents

	All families			Two parent families		
Racial classification	Child	Mom	Dad	Child	Mom	Dad
Multiple racial identifications						
White	72.4	72.2	77.6	78.6	78.5	77.6
Black	17.1	14.9	9.2	9.6	7.9	9.2
American Indian	2.6	2.3	2.0	2.5	2.2	1.9
Another race	9.0	8.8	8.7	9.2	8.9	8.7
Mexican	17.7	15.9	16.4	18.0	16.5	16.4
Puerto Rican	2.5	1.6	1.8	2.1	1.3	1.8
Cuban	0.8	0.6	0.7	0.9	0.6	0.7
Other Latina/o	4.1	4.1	3.8	4.1	4.0	3.8
Indian	1.0	0.9	1.1	1.2	1.1	1.1
Chinese	1.0	0.9	1.0	1.2	1.1	1.0
Filipino	0.9	0.8	0.7	1.0	0.8	0.7
Japanese	0.3	0.3	0.2	0.3	0.4	0.2
Korean	0.5	0.4	0.4	0.5	0.4	0.4
Vietnamese	0.4	0.4	0.5	0.5	0.5	0.5
Other Asian	0.4	0.4	0.3	0.5	0.4	0.3
Hawaiian	0.2	0.2	0.1	0.2	0.2	0.1
Guamanian	0.0	0.0	0.0	0.0	0.0	0.0
Samoan	0.2	0.1	0.1	0.2	0.1	0.1
Other Pacific Islander	0.1	0.1	0.1	0.1	0.1	0.1
Sum	131.3	124.9	124.9	130.6	125.0	124.9
Combinations						
White only	53.2	57.0	62.5	59.7	63.2	62.6
Black only	13.7	13.8	8.4	7.1	7.0	8.4
Asian only	2.8	3.3	3.6	3.3	3.9	3.6
Pacific Islander only	0.2	0.2	0.2	0.2	0.2	0.2
American Indian only	0.5	0.7	0.5	0.4	0.7	0.5
Another race only	0.2	0.1	0.1	0.2	0.1	0.1
White/Latino	14.3	13.0	13.4	14.6	13.3	13.4
White/Black	1.5	0.4	0.1	1.2	0.3	0.1
White/American Indian	1.0	0.8	0.7	1.0	0.8	0.7
White/Asian	0.8	0.3	0.3	0.9	0.3	0.3
Latino/Black	0.8	0.3	0.4	0.6	0.3	0.4
Latino/American Indian	0.5	0.4	0.5	0.5	0.4	0.5
Latino/Another race	8.3	8.4	8.5	8.5	8.5	8.5
Other combinations	2.2	1.2	0.9	1.8	1.1	0.9
Sum	100.0	100.0	100.0	100.0	100.0	100.0
Total N	10,305	10,284	8,056	8,035	8,035	8,035
Sum of weights	3,942,206	3,935,153	3,125,161	3,118,108	3,118,108	3,118,108

Source: ECLS-B 9-Month Restricted-Use Data File.

Table 2. Percentage of 2001 newborn children with selected characteristics

Characteristic	All families	Two parent families
Child's sex		
Male	51.2	51.5
Female	48.8	48.5
Family type		
Biological mother and father	79.1	100.0
Biological mother only	20.7	0.0
Biological father only	0.2	0.0
Mother's education		
Less than high school	27.4	22.8
High school diploma	21.7	20.0
Some college	26.3	27.4
Bachelor's degree	17.1	20.7
Graduate degree	7.4	9.0
Missing	0.1	0.0
Mother's country of origin		
United States	78.1	76.1
Outside the United States	21.5	23.6
Country of origin unknown	0.4	0.3
Geographic region		
Northeast	16.9	17.1
Midwest	22.3	22.7
South	36.9	35.2
West	24.0	25.0
Number of races identified by parents		
One	70.2	68.5
Two	25.1	25.9
Three or more	4.7	5.7
Mean	1.35	1.38
Standard deviation	0.59	0.62
N	10,305	8,035
Sum of weights	3,942,206	3,118,108

Source: ECLS-B 9-Month Restricted-Use Data File.

Table 3. Percentage of simplifications and additions, by covariates

Characteristic	All families					Two parent families				
	Simplification					Simplification				
	Parents separate		Either		Simplification	Parents separate		Either		Simplification
	Mother	Father	parent	Addition	or Addition	Mother	Father	parent	Addition	or Addition
Total	4.9	4.0	7.2	3.9	9.2	4.7	3.9	7.4	1.3	7.7
Child's sex										
Male	4.8	3.6	6.7	3.8	8.6	4.6	3.6	6.9	1.4	7.3
Female	5.1	4.4	7.7	4.0	9.9	4.8	4.3	8.0	1.1	8.1
Family type										
Biological mother and father	4.7	3.9	7.5	1.3	7.7	4.7	3.9	7.4	1.3	7.7
Biological mother only	5.9		5.9	13.7	14.8					
Biological father only		31.2	31.2	21.5	31.9					
Mother's education										
Less than high school	6.0	6.3	8.5	5.4	11.3	6.1	6.3	9.9	1.8	10.0
High school diploma	4.9	3.7	7.1	4.3	9.4	4.9	3.7	7.9	1.0	8.0
Some college	5.8	3.4	7.9	4.2	10.2	5.5	3.4	7.9	1.5	8.5
Bachelor's degree	2.9	3.1	5.2	1.5	6.1	2.9	3.1	5.3	0.6	5.4
Graduate degree	2.6	1.8	3.7	1.5	4.3	2.4	1.8	3.6	1.3	4.2
Mother's country of origin										
United States	4.3	3.2	6.1	4.2	8.5	4.0	3.1	6.3	1.3	6.6
Outside the United States	7.2	6.6	10.8	2.7	11.6	6.9	6.6	11.1	1.3	11.3
Region										
Northeast	6.0	4.7	8.5	5.2	11.3	5.0	4.7	8.1	1.5	8.5
Midwest	3.6	2.2	4.7	2.9	6.5	3.4	2.2	4.8	0.7	4.9
South	4.2	4.1	6.4	2.9	8.0	4.8	4.0	7.5	1.5	7.9
West	6.5	5.0	9.7	5.3	12.2	5.5	4.9	9.3	1.3	9.5
Number of races identified by parents										
One	0.7	0.1	0.7	3.0	3.0	0.1	0.1	0.1	0.5	0.5
Two	10.1	7.2	13.9	5.8	15.2	8.5	7.0	12.9	2.5	13.1
Three or more	41.6	35.9	68.5	6.4	69.9	42.3	35.9	70.5	5.7	70.9
N	10,284	8,056	10,305	10,305	10,305	8,035	8,035	8,035	8,035	8,035
Sum of weights	3,935,153	3,125,161	3,942,206	3,942,206	3,942,206	3,118,108	3,118,108	3,118,108	3,118,108	3,118,108

Source: ECLS-B 9-Month Restricted-Use Data File.

Table 4. Percentage of simplifications and additions corresponding to specific racial classifications

Characteristic	All families				Two parent families			
	Simplification				Simplification			
	Parents separate		Either		Parents separate		Either	
	Mother	Father	parent	Addition	Mother	Father	parent	Addition
White	34.0	26.2	31.6	15.0	35.8	26.6	32.4	9.6
Black	3.6	9.7	6.5	25.5	2.7	9.9	6.6	10.3
American Indian	10.0	11.4	11.8	7.8	9.7	9.9	11.2	8.8
Another race	21.5	15.3	20.5	16.3	18.4	15.5	18.5	29.3
Mexican	8.9	8.0	8.9	21.5	8.1	8.1	8.4	10.2
Puerto Rican	4.6	6.1	5.6	9.4	3.6	6.3	5.3	1.9
Cuban	1.5	1.9	1.9	2.3	1.4	1.9	1.9	5.7
Other Latino	16.1	21.5	18.6	6.9	19.0	21.9	21.1	12.4
Indian	0.4	0.8	0.6	0.5	0.5	0.8	0.7	1.1
Chinese	0.8	0.8	0.8	0.5	1.0	0.8	0.9	0.5
Filipino	2.2	0.8	1.8	0.9	2.5	0.8	1.9	1.2
Japanese	2.3	1.3	2.0	0.2	2.4	1.3	2.0	0.2
Korean	0.6	0.2	0.5	1.3	0.6	0.2	0.5	0.2
Vietnamese	0.4	0.8	0.6	0.2	0.5	0.9	0.7	0.5
Other Asian	0.8	0.1	0.6	0.8	1.0	0.1	0.7	1.7
Native Hawaiian	1.1	1.6	1.5	1.6	1.5	1.6	1.8	1.8
Guamanian	0.3	0.7	0.5	0.4	0.0	0.8	0.4	0.0
Samoan	0.1	0.1	0.1	1.8	0.1	0.1	0.1	5.1
Other Pacific Islander	0.7	0.2	0.6	0.4	0.8	0.2	0.7	0.4
N	588	392	876	477	448	387	731	125
Sum of weights	194,337	124,543	282,200	153,132	145,894	122,340	231,554	39,414

Source: ECLS-B 9-Month Restricted-Use Data File.

Table 5a. Logit coefficients predicting a simplification inconsistency, all families

	Simplification				
Variable	(1)	(2)	(3)	(4)	(5)
Constant	-2.889 **	-5.227 **	-5.405 **	-5.403 **	-5.322 **
Mothers age	-0.019	0.001	-0.002	-0.002	-0.008
Male	-0.160	-0.086	-0.057	-0.064	-0.061
Mother's education					
Less than HS	0.031	-0.208	-0.114	-0.115	-0.044
Some college	0.115	0.126	0.083	0.165	0.194
Bachelors degree	-0.278	0.059	0.056	0.200	0.199
Advanced degree	-0.696 **	-0.013	-0.291	-0.138	-0.048
Region					
Northeast	0.609 **	0.127	0.203	0.184	-0.165
South	0.259	-0.017	0.102	0.148	0.050
West	0.625 **	-0.269	-0.062	-0.062	-0.013
Mother is foreign born	0.471 **	-0.725 **	-0.383 **	-0.414 **	-0.570 **
Single biological parent	-0.297	0.557 **	0.780 **	0.807 **	0.660 **
Number of parental races					
Linear term		4.598 **	5.636 **	5.718 **	5.627 **
Squared term		-0.738 **	-0.948 **	-0.986 **	-0.892 **
Mother/father race (7)					
Latino			-1.432 **	-1.826 **	
Black				-0.257	
American Indian				-0.051	
Asian				-0.281	
Pacific Islander				0.469	
Other race				0.782 **	
Mother/father race (19)					
Black					-0.340
American Indian					-0.139
Another race					0.661 **
Mexican					-2.004 **
Puerto Rican					-1.466 **
Cuban					-1.320 **
Other Latino					-0.480
Asian Indian					-0.265
Chinese					-1.380
Filipino					-0.647
Japanese					0.179
Korean					-1.020
Vietnamese					-0.486
Other Asian					-0.270
Hawaiian					0.036
Guamanian					1.018
Samoan					-0.716
Other Pacific Islander					0.281
Observations	10305	10305	10305	10305	10305

* significant at 5%; ** significant at 1%

Source: ECLS-B 9-Month Restricted-Use Data File.

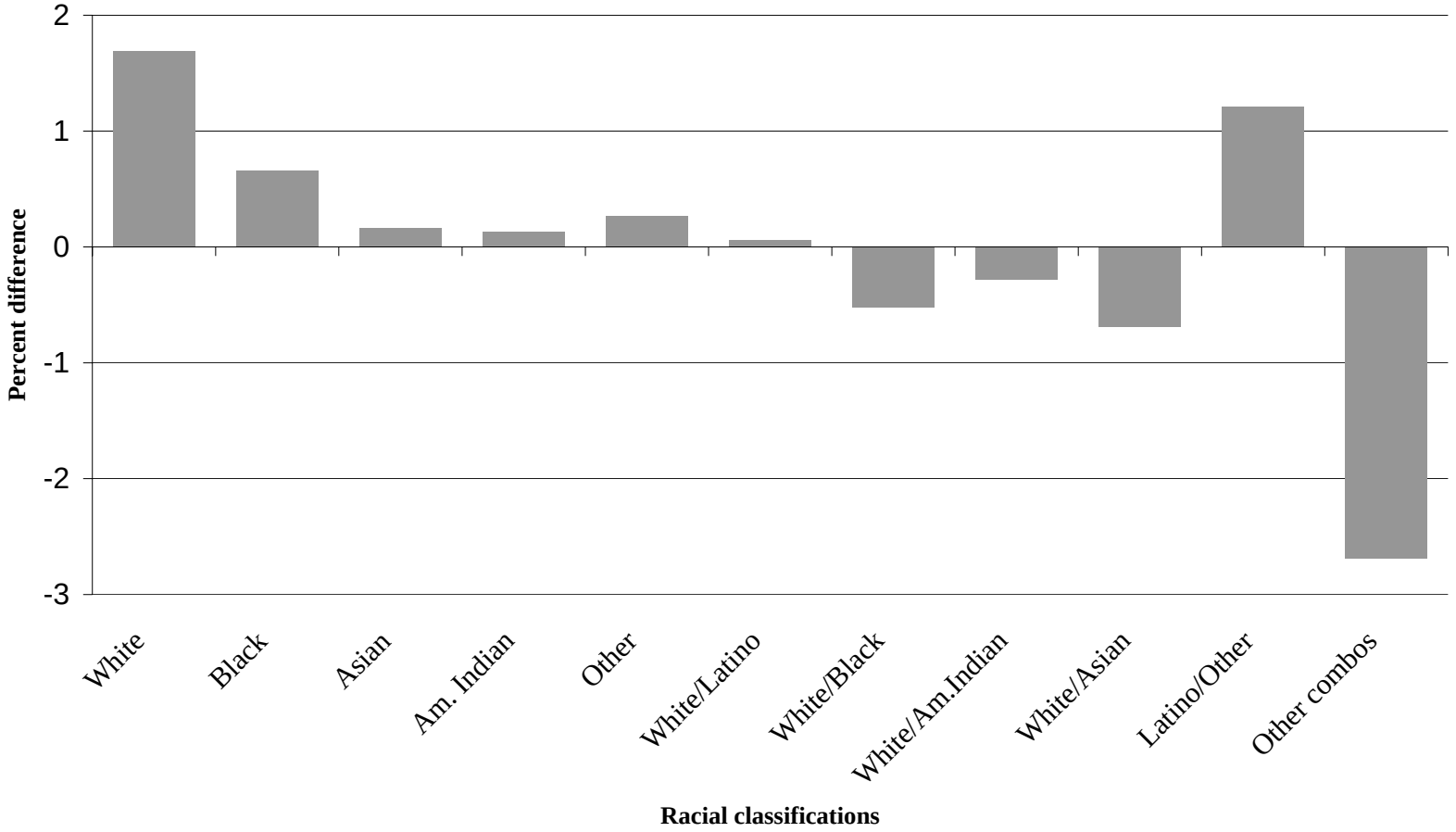
Table 5b. Logit coefficients predicting a simplification inconsistency, two parent families

	Simplification				
Variable	(1)	(2)	(3)	(4)	(5)
Constant	-2.901 **	-6.489 **	-6.684 **	-6.575 **	-6.765 **
Mothers age	-0.021	0.003	0.003	0.003	-0.006
Male	-0.169	-0.083	-0.083	-0.091	-0.088
Mother's education					
Less than HS	0.072	-0.206	-0.069	-0.100	-0.099
Some college	0.091	0.075	0.047	0.127	0.100
Bachelors degree	-0.266	0.164	0.156	0.300	0.331
Advanced degree	-0.713 **	0.032	-0.312	-0.160	-0.117
Region					
Northeast	0.538 *	0.158	0.235	0.213	0.017
South	0.396 *	0.141	0.282	0.301	0.247
West	0.541 *	-0.316	-0.111	-0.099	-0.062
Mother is foreign born	0.487 **	-0.759 **	-0.349 *	-0.368 *	-0.460 **
Number of parental races					
Linear term		6.200 **	7.328 **	7.576 **	8.096 **
Squared term		-1.149 **	-1.376 **	-1.433 **	-1.379 **
Mother/father race (7)					
Latino			-1.597 **	-2.135 **	
Black				-0.371	
American Indian				-0.375	
Asian				-0.598 *	
Pacific Islander				0.327	
Other race				0.581 **	
Mother/father race (19)					
Black					-0.779 *
American Indian					-0.813 *
Another race					0.342 *
Mexican					-2.562 **
Puerto Rican					-2.500 **
Cuban					-2.349 **
Other Latino					-0.971 **
Asian Indian					-0.915
Chinese					-1.674
Filipino					-1.307 **
Japanese					-0.503
Korean					-1.505 *
Vietnamese					-1.336
Other Asian					-0.861
Hawaiian					-0.021
Guamanian					-1.092
Samoan					-1.206
Other Pacific Islander					-0.190
Observations	8035	8035	8035	8035	8035

* significant at 5%; ** significant at 1%

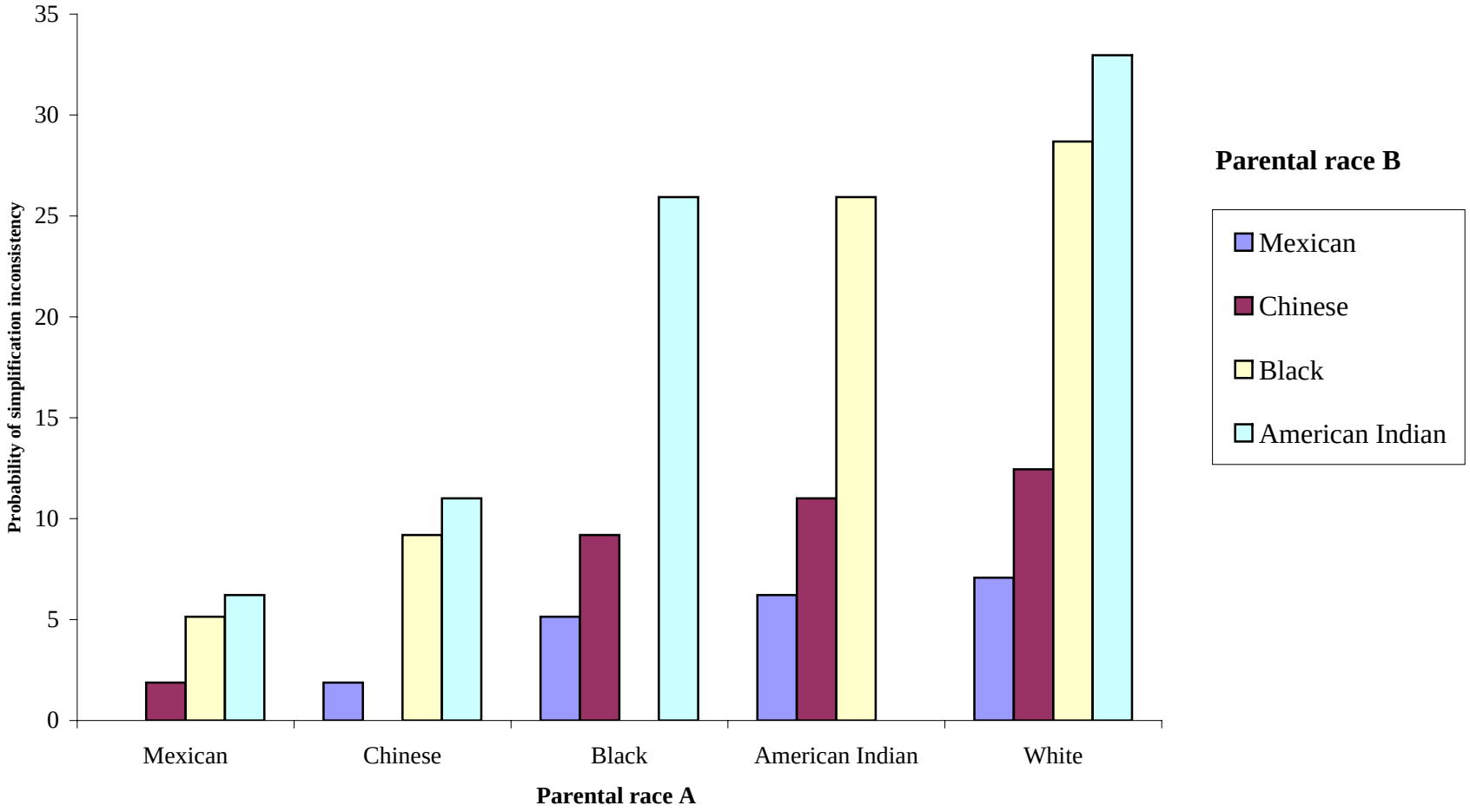
Source: ECLS-B 9-Month Restricted-Use Data File.

Figure 1. Over- or under-estimate of racial distribution for ECLS-B children



Note: Based on comparison of the reported racial classifications of children in the ECLS-B sample and those expected if the children were described as the exact combination of their parents races. Positive differences indicate more children were classified in the group than expected.

Figure 2. Predicted probabilities of simplification inconsistencies for single and two parent families with exactly two races, by selected two race combinations



Note: These figures are calculated based on column 5 of table 5a. Thus, they represent the additive probability of a simplification inconsistency when families are given two different racial classifications. In other words, the probabilities are calculated based on the independent effects of the racial classifications, and not their interactions.