

**Measuring Race and Hispanic Origin:  
Cognitive Test Findings Searching for “Truth”<sup>1</sup>**

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**Abstract**

There is no true gold standard for measuring race and Hispanic origin when they are, by definition, self-identification concepts. U.S. Census Bureau staff developed and cognitively tested a telephone interview that will serve as a gold standard to evaluate experimental versions of Hispanic origin and race questions during the 2010 Census. Three methods of measuring race and Hispanic origin were developed and tested during cognitive testing that allowed us to generate what we believe is a robust, though never fully comprehensive, portrait of self-identified race and Hispanic origin. The first method is an open-ended question that allows the respondent to self-identify with any races or Hispanic origins. The second method is a series of yes/no questions aimed at measuring identification with the Office of Management and Budget (OMB) race and Hispanic origin categories.<sup>2</sup> The final method is a summary measure which attempts to gather the respondent’s usual or typical report to race and Hispanic origin questions.

This paper provides the results of three rounds of iterative cognitive testing of this interview conducted with 37 respondents, including members of all of the OMB race and Hispanic origin groups (including 10 multiracial respondents and 12 Hispanic respondents). Importantly, while these questions worked well for most respondents, we found that there is no single true gold standard for measuring race and Hispanic origin. However, this paper highlights the findings and compares the results from each method of measuring race and origin in an attempt to assess “truth.”

**Keywords:** Race and Hispanic origin; Cognitive Interviews; Iterative pretesting; Gold standard

## 1. Introduction

As a part of the 2010 Census, the U.S. Census Bureau fielded a Race and Hispanic Origin Alternative Questionnaire Experiment (AQE). As a part of this experiment, almost 500,000 housing units received an alternate questionnaire as their 2010 Census form. The goal of the AQE was to study improving the completeness and accuracy of respondent reporting to the race and Hispanic origin questions. For this study, the terms “race” and “Hispanic origin” are defined by the Office of Management and Budget (OMB, 1997).<sup>3</sup>

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<sup>1</sup> *Disclaimer:* This report is released to inform interested parties of research and to encourage discussion. This views expressed are those of the authors and not necessarily those of the U.S. Census Bureau

<sup>2</sup> U.S. federal government agencies must adhere to the 1997 Standards for the Classification of Federal Data on Race and Ethnicity, issued by the Office of Management and Budget. The standards are available at the following website: <http://www.whitehouse.gov/omb/fedreg/1997standards.html>.

<sup>3</sup> In the 1997 OMB standards, race and ethnicity are treated as two separate and distinct concepts, with five minimum categories for race (“White,” “Black or African American,” “American Indian or Alaska Native,” “Asian,” and “Native Hawaiian or Other Pacific Islander”) and two minimum categories for ethnicity (“Hispanic or Latino” and “Not Hispanic or Latino”). The U.S. Census

As a part of the evaluation of the AQE forms, a reinterview was conducted to measure bias (or the difference) between the initial paper questionnaire responses and the phone reinterview responses (Compton, Bentley, Rastogi, and Ennis, 2010). Responses to the phone reinterview will be used to create a single truth measure to which each panel can be compared. The difference between this reinterview response measure and the paper questionnaire responses on each panel will make up the 'response' bias measures for each panel.

The goal of this cognitive interviewing was to test for misunderstandings or misinterpretations of questionnaire wording and to examine whether the AQE Reinterview (RI) questionnaire gathered a reliable and valid self-identification of race and Hispanic origin prior to fielding the instrument. This paper discusses the findings of three rounds of iterative testing of this questionnaire at a high level. More detailed results and recommendations, as well as decisions on the final 2010 Census Race and Hispanic Origin AQE RI questionnaire are documented in Childs, Terry, Jurgenson, Clifton and Higbie (2010).

## 2. Method

### 2.1 The Questionnaire

In the AQE RI, the respondent (Person 1) answers questions about him or herself as well as a randomly selected second person in the household (Person 2), if there are two or more household members.<sup>4</sup> The final RI questionnaire consists of three methods for measuring race and Hispanic origin: (a) two open-ended questions, (b) a series of yes/no questions for Hispanic origin and race categories that appear on the census form and correspond with OMB categories (e.g., White, Black/African American, Asian, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander), and (c) a “summary” question that attempts to gather a typical response that the respondent usually gives when asked about race and origin after the respondent had been exposed to all of the OMB race and Hispanic origin categories.

The three methods of measuring race and origin were developed with slightly different goals, to gain a complete picture of race and origin reporting for people who may respond differently when asked about these topics in different ways. The open-ended question is aimed at gathering a relatively untainted report of race and origin. Prior to being exposed to any of the race and origin categories that the census uses, within the context of the interview, we asked how the respondent reports his or her own race and origin. The second measure, the yes/no series, exposes the respondent to each of the race and Hispanic origin categories that appear on the 2010 Census form to allow reporting of multiple races and origins (as is allowed in the 2010 Census), as well as to encourage attention to each and every option. The final “summary” question was developed after the Pilot Test to provide the respondent with an opportunity to summarize how he or she identifies, after considering each of the response categories on the census form to ensure

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Bureau is permitted to use the “Some Other Race” category to help those who are unable to identify with any of the OMB race categories.

<sup>4</sup> In the production instrument, the second person will be randomly selected from the household members. For the cognitive test, the interviewer picked the person he or she thought would be the most informative (or different from the respondent) to serve as the second person.

that they had not overreported. These three measures of race and Hispanic origin are followed in the reinterview by scripted debriefing questions.

The specific questions that were tested are summarized below, but they can be found in detail in the full project report (Childs, et al. 2010). Discussions of the particular questions and revisions between rounds are also found in the full project report.

### 2.1.1 *First Method of Measuring Race and Hispanic Origin: Open-Ended Questions*

The first measure of race and Hispanic origin is comprised of two open-ended questions, allowing respondents to choose the way they self-identify without explicitly putting constraints on their answer choices (See Figure 1). Respondents bring their own assumptions to this report, but the questions do not impose restrictions on their response. If respondents were given a set of categories to choose from, they may think they are required, or may find it less burdensome, to choose among the categories given (Tourangeau, Rips, & Rasinski, 2000). This would defeat our intent of having respondents provide a self-identification that is free of any suggestive categories given by the interviewer. This also allows us to examine how detailed their responses are with no prompting on the amount of detail requested (e.g., whether the respondent self-identifies as “Asian” or “Chinese” in the absence of categories to choose from). Recognizing that respondents have preconceived notions of how to respond to questions on race and origin, this was our attempt at gathering a “pure” self-identification.

D1. What is your race or origin?
D2. Are you any other race or origin?

**Figure 1.** Race and Hispanic Origin Open-Ended Questions: Final Wording.

### 2.1.2 *Second Method of Measuring Race and Hispanic Origin: Yes/No Series*

The second method of measuring race and Hispanic origin asked the respondent a series of yes/no questions that encourages them to self-report as many races or origins as they wished, while exposing them to the census race and Hispanic origin categories.

Based on the findings from the Pilot Test, to reduce respondent burden, we recommended creating branching questions that asked each general race or Hispanic origin category and followed up with the specific race or origin groups only if the respondent reports “yes” to that general category.

Thus, beginning with Round 1, the 19 yes/no race and origin questions were changed to use a branching structure. First, the respondent is asked a question about a general race or origin category (White, Black/African American, Hispanic, Asian, etc.) and then a second set of questions is administered with the specific races or origins if a person responded affirmatively to the general question. If a person responds “No” to any general question, the interviewer skips all of the follow-up questions associated with that race or origin group. For example, if the respondent is asked “Are you Asian?” and says “no,” the interviewer will skip the follow-up questions (e.g., “Are you Asian Indian?” “Are you Chinese?”). See Figure 2 for how this was implemented in the final questionnaire.

- E1. Now, I am going to ask you a series of questions about race and origin and would like you to respond to each one. You may identify with as many races and/or origins as you wish. These questions may seem repetitive, but it is important that we ask them of each person to measure the quality of our census.
- E2. Are you White?
- E3. Are you Black or African American?
- E4. Are you of Hispanic, Latino, or Spanish origin, for example, Mexican, Mexican American, or Chicano; Puerto Rican; Cuban; or another Hispanic, Latino, or Spanish origin?
- E5. *(Ask or verify.)* Are you Mexican, Mexican American, or Chicano?
- E6. *(Ask or verify.)* Are you Puerto Rican?
- E7. *(Ask or verify.)* Are you Cuban?
- E8. Are you another (or What is your other) Hispanic, Latino, or Spanish origin, for example, Dominican, Salvadoran, Colombian, Spaniard, and so on?
- E9. Are you American Indian or Alaska Native?
- E10. Are you Asian, for example, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, or another Asian race or origin?
- E11. *(Ask or verify.)* Are you Asian Indian?
- E12. *(Ask or verify.)* Are you Chinese?
- E13. *(Ask or verify.)* Are you Filipino?
- E14. *(Ask or verify.)* Are you Japanese?
- E15. *(Ask or verify.)* Are you Korean?
- E16. *(Ask or verify.)* Are you Vietnamese?
- E17. Are you another (or What is your other) Asian race or origin?
- E18. Are you Native Hawaiian or other Pacific Islander, for example, Native Hawaiian, Guamanian or Chamorro, Samoan, or another Pacific Islander race or origin?
- E19. *(Ask or verify.)* Are you Native Hawaiian?
- E20. *(Ask or verify.)* Are you Guamanian or Chamorro?
- E21. *(Ask or verify.)* Are you Samoan?
- E22. Are you another (or What is your other) Pacific Islander race or origin?
- E23. Are you Some other race or origin not yet mentioned?

**Figure 2.** Race and Hispanic Origin Yes/No Questions: Final Wording.

### 2.1.3 Third Method for Measuring Race and Hispanic Origin: Summary Question

After the Pilot Test, we incorporated a third method of measuring race and Hispanic origin. For this method, we attempted to gather a summary response. After hearing all of the categories presented on the census questionnaire, we attempted to ask how the respondent would self-identify (first pointing out the census context in Round 1, and then moving towards a typical or usual context in Round 2). In this question, we attempted to acknowledge the redundancy, and ask for a summary of how the respondent self-identifies. Figure 3 shows the final version of this question.

**Round 1:**

We have asked you a lot of questions about your race or origin. I would like you to think about how you would answer the following question on a Census questionnaire. What is your race or origin? You may report more than one.

**Round 2:**

I have asked you a lot of questions about your race and origin. Now I'd like you to think about what you *usually* say when asked about your race and origin. This may or may not be the same as what you've already told me. Keeping in mind that you can say more than one, what do you usually say when asked about your race and origin?

**Figure 3.** Race and Hispanic Origin Summary Question: Tested Wording.

## 2.2 The Cognitive Interview

From May through July of 2009, 37 cognitive interviews were conducted using face-to-face interviews with a paper script that could be read over the telephone. The 2010 AQE RI was conducted with a CATI (Computer Assisted Telephone Instrument) interview. The testing was conducted in an iterative manner. As modifications to the questionnaire were needed, they were made. This resulted in three ad hoc rounds of testing, one for each iterative modification.

The protocol for the cognitive interviews combined verbal think-aloud reports with retrospective probes and debriefing. Each cognitive interview involved two interviewers working together, face-to-face with the respondent. One interviewer read the RI questionnaire as if he or she was conducting the actual phone interview. Meanwhile, another interviewer observed the interview, took notes, and later asked cognitive interview and retrospective debriefing questions after the RI questionnaire was complete. The cognitive interview and probing questions aimed to explore respondents' understanding of the race and Hispanic origin questions, their typical response to these questions, any variation that they might have in reporting race and origin, and their sense of burden of the interview. The debriefing probes were semi-scripted, allowing the interviewer to probe on things that occurred spontaneously while also covering a set of required material.

After each interview, the cognitive interviewer listened to his or her tape and wrote a detailed summary of the interview, noting respondents' answers to each question as well as answers to the probes. The project manager used the set of interview summaries from each round for the analysis.

## 2.3 Respondents

Participants were recruited using flyers, word of mouth, and an database of participants who have not participated in a Census Bureau cognitive interview study for at least three months. Staff conducted screener interviews with all potential respondents over the phone in order to determine respondents' race and Hispanic origin, education level, federal government employee status, and other demographic information to determine their eligibility for the cognitive interview. We attempted to recruit respondents from as many race and Hispanic origin groups (including multiracial) as possible.

Thirty-seven people in Maryland, Virginia, and Washington, D.C. served as respondents in this study. Of the respondents, 28 were female and nine were male. Respondents had a variety of living situations that included unrelated and related household members. Table 1 shows the racial composition of these respondents.<sup>5</sup> Though we were satisfied with the racial and origin diversity of respondents, we did not have any respondents that only identified as only Pacific Islander, and we only had one monoracial Asian respondent. However, multiracial respondents did include representatives from these groups.

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<sup>5</sup>Race is defined here by the instrument's set of questions in which ask a series of yes/no questions about the census race and Hispanic origin categories (i.e., White, Black/African American, Asian, American Indian or Alaska Native, and Native Hawaiian or other Pacific Islander).

**Table 1.** Racial Composition of Interview Respondents

Race/Hispanic Origin	Pilot Test	Round 1	Round 2 <sup>6</sup>	Total
White		5	1	6
Black		3	3	6
Asian	1			1
AIAN	1	1		2
Pacific Islander				
Hispanic		2	10	12
Pacific Islander/White	1	1		2
Asian/White		2	1	3
Hispanic/Asian		1		1
Black/Asian		1		1
Black/American Indian			2	2
Black/White			1	1
<b>Total</b>	<b>3</b>	<b>16</b>	<b>18</b>	<b>37</b>

In Round 1, we recruited respondents to represent as many races and origins as possible, including multiracial respondents. Researchers interviewed sixteen respondents in Round 1. In Round 2, respondents were recruited primarily for being of Hispanic origin and multiracial. The purpose of this was to more thoroughly examine how the series of questions work for Hispanic respondents, including a newly added Hispanic debriefing probe, as well as to evaluate whether the revision of particular questions to obtain multiracial reports when appropriate. A total of eighteen respondents were interviewed for Round 2. In addition to the ten Hispanic and four multiracial respondents, four monoracial respondents were interviewed to assess respondent burden for monoracial respondents.

Our Hispanic respondents (12 total, English and Spanish speaking) included people from the following origins: Spanish, Dominican, Puerto Rican, Peruvian, Bolivian, Salvadoran, Mexican, and Guatemalan. In the second round of testing, we interviewed six respondents using a Spanish translation of the questionnaire.<sup>7</sup> This was done to assess the quality of the translation and understand any differences that may occur in comprehending and responding to these questions when administered in Spanish, as opposed to English. The final CATI interview is available in both English and Spanish.

#### 2.4 Limitations

This cognitive interview test is limited in a number of ways. First, this test was conducted face-to-face. The difference in the mode could impact perceived respondent burden as well as result in differences in responses attributable to the presence of an in-person interviewer or race of interviewer effects (Cotter, P.R., Cohen, J., & Coulter, 1982; Sudman & Bradburn, 1974; Hatchett & Schuman, 1975; Campbell, 1981; Weeks & Moore, 1981).

The small number of respondents in each racial group is a limitation to this study. In particular, the very small number of Spanish-speaking respondents is a limitation. With more time and resources, we could have interviewed a larger number of respondents generally, and Spanish-speakers specifically.

<sup>6</sup> Six of the Hispanic respondents were interviewed in Spanish using the Spanish translation.

<sup>7</sup> The Spanish translation was not yet prepared for the Pilot or Round 1 of the test.

Respondents in this study may have inadvertently been more educated than the general population, and this may have led to better understanding within this population than one would find in the general public. Researchers noted this in the second round when interviewing Spanish-speakers who were notably less educated than the previous respondents. Because this was not measured or identified earlier in testing, we can only speculate how this may have impacted the results.

A few respondents were recruited with a newspaper ad that asked for those who are multiracial or not born in the United States. This could have impacted their later reports on race and ethnicity. If the respondent thought that multiraciality was of interest for this study, they may have been more inclined to report a multiracial identity. However, most respondents were not recruited this way.

Finally, the participants for this study were not selected at random or to be representative of the entire population of the United States. Interviews were only conducted with a convenience sample of respondents in the Washington DC metropolitan area. Because these respondents are not representative of the general U.S. population, these findings may not be applicable to the entire population.

## **2.5 Pilot Test**

The approach of the initial questionnaire was to ask an open-ended question on race or origin, followed by probes asking yes/no questions to each of the 19 race and origin groups that are response options on the 2010 Census form. These groups are as follows: White, Black or African American, Mexican, Puerto Rican, Cuban, Other Hispanic, American Indian or Alaskan Native, Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian, Native Hawaiian, Guamanian or Chamorro, Samoan, Other Pacific Islander, or Some Other Race. (See Childs et al. 2010 for the full Pilot Test AQE RI questionnaire that was used.)

We began this testing by interviewing several new Census Bureau staff members as practice interviews. Though this is not atypical, we report findings from these practice interviews, as well as the first few “real” respondents in this test which led to a revision of the questionnaire, as the Pilot Test.

Primarily based on the findings that the Pilot Test questionnaire caused respondents to show symptoms of fatigue and frustration, and that respondents sometimes seemed to report additional races or origins because so many questions were asked, the round was terminated after only three practice respondents and three “real” respondents. In addition to the burden, researchers were concerned, based on the practice interviews and the first three interviews, that respondents would report more than one race or origin because the interviewer was asking so many questions and not because they truly identified with that additional race or origin. We suspect that this could be due to conversational norms that suggest a questioner will only ask for the same information once, and if the questioner continues to ask questions, then he or she must be looking for a different response (Grice, 1975). After discussing the preliminary results of these interviews, the interdivisional AQE RI team decided that substantive revisions to the questionnaire were necessary before further cognitive testing.

### 3. Results

The results are organized first by the general findings and then on assessing “truth” in this instrument.

#### 3.1 When Race and Origin Differ

Overall we noted that using the term “origin” alongside the term “race” may increase the likelihood for respondents to report a country of origin. Example responses from various respondents and various points in the interview include “White Russian,” “Korean American,” and a Hispanic mother “born in New York.” One respondent, during the debriefing, reported that if she thought she was being asked for her ethnicity, she would say “Asian,” but if she thought she was asked for her race, she would say “other – Asian and White.” (She reported Filipino and White to the first and second methods of measurement in this test and “Other or Asian” to the third method.)

Some respondents also seemed to have problems reporting if they were born in a country outside the U.S., but their parents were from a third country. For example, one respondent was born in Argentina, with parents from Spain. She reported as White and Hispanic to the first two methods, but only Hispanic and Latino to the third method. Another respondent’s mother was born in Jamaica and had Asian Indian parents. This respondent reported Asian Indian for her mother in the first two methods, but reported “Jamaican” in the third method. In a third example, one respondent answered consistently throughout the measures that he was Puerto Rican, however during the debriefing the interviewer found out that his mother was actually half Cuban. The debriefing showed that he answered the whole series of questions about origin understanding them to be asking about the place he was born. In fact, this respondent reported his mother was “born in New York” when asked for her race or origin. We know from other questions that she is of Puerto Rican and Cuban descent. In the final example of this type, the respondent was a first generation immigrant to the U.S. She was born and raised in Africa, but her ancestors are from India. She reported both Asian and African in all three measures, which could be interpreted as multiracial. Though we note these problems, we do not think they can be remedied in this questionnaire. We suspect the source of the confusion stems from the need to ask for both race and origin. This finding is not unique to this questionnaire or this research. It has been found in other research as well (e.g., Fernandez, Gerber, Clifton, Higbie, & Meyers, 2009).

Specifically regarding the Yes/No series, we noted that it is difficult for respondents to unequivocally report “yes” when they report that the person is “half” or “partly” of that race or origin. This is especially relevant in cases where respondents acknowledge another race or origin, but do not really identify themselves with that race or origin. For example, one respondent’s mother was white, and father was African American, but she was raised in an African American culture. She seemed hesitant to report “yes” to the question “Are you white?” without further qualifying it. It is difficult to determine what is “right” and “wrong” in these cases. If the person reports “African American” only, as a self-identification, it is not incorrect. However, she could also report both White and African American and it would still be a correct self-identification. Therein lies the difficulty with this type of measurement.



### 3.2 Respondent Burden

Overall, most respondents did not display signs of excessive burden in Round 1 or Round 2 in the ways seen in the Pilot Test.<sup>8</sup> However, three of the Spanish-speaking respondents in Round 2 did demonstrate signs of frustration. One Spanish-speaking respondent sighed throughout the interview. He only had one origin or race to report – he and Person 2 were Mexican – and seemed frustrated that the interviewer kept asking questions. Another Spanish-speaking respondent also seemed over-burdened by the repetitiveness of the questions, displaying both verbal and nonverbal signs of frustration because she said she felt like she had already told the interviewer what her answers were, and she did not have anything more to report. During the debriefing, when asked about the interview, she commented that the interview was asking "the same question" over and over, sometimes with different choices. We do not think this is a problem specific to the Spanish translation, but rather it is one that would likely apply to many respondents of Hispanic origin who only have one origin to report to all of these questions on race and origin. This type of finding has been found in surveys who ask as few as three questions about Hispanic origin, race and ancestry (Childs, Landreth, Goerman, Norris, & Dajani, 2007). Hispanic respondents in this study who also reported a race did not seem as burdened as those who did not.

We think some of these issues may result from conversational norms that would suggest that if the interviewer (asker) is requesting more information, then the requested information must be something that has not been previously provided (Grice, 1975; Tourangeau, Rips, & Rasinski, 2000). It is possible that, like the conversational norms would suggest, respondents that only have one origin feel as though they are answering incorrectly when they are asked for the same information over and over again. This could cause the feelings of burden that we observed. Though we did not observe the same level of frustration with other monoracial respondents, we are also concerned about possibility for them to be overburdened.

### 3.3 Assessing “Truth”

In this section, we discuss the results gleaned from using each of these three methods of measuring race and origin. We attempt to make judgments based on the interviews that were conducted in all three rounds (understanding that some changes were made between the rounds, most notably between the Pilot Test and Round 1).

As discussed previously, it is difficult, if not impossible, to measure “true” race and origin questions because, as OMB states about race, “[the] categories represent a social-political construct... [and] are not anthropologically or scientifically based” (1997). Thus, what is being measured are beliefs about oneself that may be subject to change based on the question being asked.

When considering which of the three methods of measuring race and origin is closest to the “truth,” it is important to recognize that each method may assess different social and psychological factors associated with race and origin. In addition, because these measures were not deployed in isolation from each other or in a random way, we must think of the three measures as being complimentary rather than independent. Given this order effect we can say that the latter two methods were very likely influenced by the questions that preceded them in this test.

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<sup>8</sup>Burden was measured subjectively in the cognitive interview, looking for signs of frustration, boredom or irritation.

We examined how the respondents' answers are categorized from each of the three measures, and an indication of how they would be coded if one only looked at the parents' reported race. Because the data from Hispanic and non-Hispanic people are so different, we have chosen to display them separately.

### 3.3.1 *"Truth" for Non-Hispanic People*

Analyzing data on non-Hispanic people in this study (both respondents and the second person in their household that they reported on), in only four cases of 39 did the respondent report a race for the open-ended question that differed substantively from later reported races (Childs, et al, 2010). Interestingly, in three of these cases the respondent used a generic, non-informative term (i.e., "mixed," or "other") instead of providing a discrete race or origin. It is important to note, however, that in these cases, the generic term expressed how the respondent thought of his or her racial identity. In three cases, additional information would have been needed to do a detailed coding of race (e.g., "Asian"). There was one case (out of the 39 non-Hispanic individuals) in which the person reported to be monoracial at the first method, but later reported that she was multiracial. In this case, based on respondent debriefings, the multiracial report appears to most accurately capture the person's self identification. We saw no cases where the respondent reported that a person was multiracial to the open-ended series only to determine in the debriefing that the person self-identified primarily as monoracial. This highlights that the first measure provides an open-ended response largely uninfluenced by the race categories provided. Thus, the hypothesis that the first measure obtains a relatively "pure" view of race and origin is supported (acknowledging that no measure is ever a truly pure measure because of each person's past experience with race and origin).

We observed two scenarios that could have possibly been considered as underreporting to this open-ended method; however, we argue that the open-ended measure was the more accurate one. In two interviews, the respondents later mentioned American Indian ancestry to the second method of measurement. We do not consider this true underreporting because in these interviews the respondents indicated that they do not identify with their American Indian ancestry.

The second measure (Yes/No) of race and Hispanic origin was more problematic than the first (Childs, et al, 2010). Across all rounds, six of the 39 non-Hispanic people had races or origins reported for them in the second series of questions that were inconsistent with debriefing reports and answers to other questions about their self-identities. Three of these individuals reported as multiracial to this second set of questions, but conveyed a "true" self-identity of being monoracial (thus over-reporting to this series). These instances happened in the Pilot Test and Round 1. Two respondents reported American Indian heritage to this series that they did not report as part of their self-identity (mentioned previously) and one respondent reported distant Norwegian ancestors (in the Pilot Test, in part inspiring the revision to the questionnaire). In Round 2, we saw three people who were reported as monoracial to this series, but later reported a "true" self-identity that was multiracial (thus under-reporting to this series). One respondent expressed the belief, in relation to the second and third measures, that a person could only report one origin. She did not have this concern for the open-ended measure. The other two people were reported by the same respondent (himself and his brother) as being multiracial at the first measure, but monoracial to the second and third measures. This respondent discussed only usually reporting a single race, because it was easier for people

to understand.<sup>9</sup> Based on what he said, we believe that his true identity included the multiracial component. Switching from monoracial to multiracial and vice versa is arguably more concerning to us as researchers than the predominant problem with the first method – reporting an unclassifiable or too vague response.

There were even more problems with the third, “summary” measure of race and Hispanic origin (Childs, et al, 2010). Remember that this measure changed significantly between the rounds. Out of the 35 non-Hispanic people about whom this measure was asked, nine of them demonstrated an inconsistent response. Six people were reported to be monoracial at this question, but earlier questions had indicated that the person acknowledged being multiracial (thus under-reporting to this question). Two people reported a nonsubstantive response (i.e., “other”) to this question and one respondent reported an entirely different origin to this question (this was the case where her mother’s race is Asian Indian, but she self-identifies as Jamaican). Thus, this measure showed a tendency, in this study, to under-represent the diversity of people’s races and origins.

For non-Hispanic people in this study, Table 2 illustrates (1) the agreement rate for each of the three measures of race and origin; and (2) the agreement of each measure with the reported race and origin of their parents. While looking at these data, it is important to keep in mind that these are not independent measures because the order in which the questions were asked undoubtedly impacted later responses.

**Table 2.** Agreement Between Each Measure of Race and Origin for Non-Hispanic People.

	<b>Open-Ended</b>	<b>Yes/No</b>	<b>Summary</b>
<b>Open-Ended</b>	-	-	-
<b>Yes/No</b>	74% (30/39)	-	-
<b>Summary</b>	69% (27/35)	69% (27/35)	-
<b>Parents</b>	89% (31/35)	86% (30/35)	74% (26/35)

First, remember that these numbers are derived from a small convenience sample and should be used to demonstrate possibilities rather than determine truths. Given this, we can see that the agreement between the measures for the non-Hispanic population is roughly the same. One way to interpret this is that we might expect roughly one out of every four respondents to give a different answer when faced with any two of these measures. Whether this is too much variation for a measure to be considered valid depends on the situation at hand. In any case, this highlights the point that any report of race could be significantly different depending on how the question is asked given that the different measures each disagreed roughly a quarter of the time with each other.

Next, it is quite interesting to note that the highest agreement we see across measures occurs when we look at how the respondent reports each person’s parents’ race or origins. The parents’ origin is most similar to how the respondent answers the open-ended and yes/no questions for themselves. How the respondent reports parents’ race or origin is very likely to indicate their own self-identification (or their identification of Person 2’s race or origin). In fact, in our data, how a respondent reports their (or Person 2’s) parents’ race is a *better* indicator of the respondents own self-identification (or their

<sup>9</sup> This respondent reported as “African American and Cabo Verdean” for method 1 and “African American” for the other methods, stated that he usually just says “African American” because others do not know about Cabo Verde and it is too much of a burden to describe the country.

identification of Person 2's race or origin) than asking about self-identification in different ways. Said differently, how the respondent answers an open-ended versus yes/no questions about themselves disagrees *more than* how the respondent answers open-ended questions about themselves versus their parents. This lends evidence to the idea that asking about parents' race is a very good proxy for determining the "truth" of the respondent's own racial self-identification.

### 3.3.2 "Truth" for Hispanic Respondents

Considering this series of questions for Hispanic respondents becomes more complex. For Hispanic people in this study, we studied their responses across rounds to each of the three measures of race and origin and their parental identification. The open-ended question series generated both a race and an origin for only four people. It generated origin only for 17 people and race only for two people. The second, or Yes/No, series generated race and origin for 11 people, origin only for 10 people and race only for one person. The third, or "summary," series generated race and origin for only four people again, while for two people, the respondent did not understand this question at all (in Spanish) and answered "nothing." Interestingly, when asked about the race or origin of their parents, we received race and origin data for five sets of parents, origin-only data for 18 sets and race-only data for one set.

Looking at race and origin for Hispanic people, the data suggest that the yes/no measure gathers data that fit most closely with the OMB definitions of race and origin. However, this may not match self-identification as closely as the open-ended response. We observed three respondents in Spanish interviews who identified their race or origin as Hispanic for the open-ended question, but later responded that they were "White" or "White Latino." In these instances they identified more confidently as Hispanic, but acknowledge that they may also be considered White – with a qualification or uncertainty (e.g., White Latino, or "White, I think"). In these instances, we believe that the open-ended response more closely captured their personal self-identification than later reports based on how they provided each answer and on information provided in the debriefing.

In two interviews, the respondent only reported "White" as his or her race or origin to the open-ended measure, but later acknowledged that they were also of Hispanic decent. One of these people was a Bolivian who reported his Bolivian descent to the second and third measures. The other was the European Spanish respondent who made very clear that the term "Hispanic" was not one that she identified with and only reported her Spanish descent to the third measure. In these cases, the third measure most accurately captured their full identities.

One Hispanic respondent over-reported in the second measure, mentioning "Mixed, black and white" at the yes/no question probing about "Some Other Race." This was the only time she mentioned being "white" in the entire interview. At this point, based on what she said, she was talking about her relatives, and her ancestral line, not her own racial identity. Once again, respondents' responses to the first and third were more indicative of their self-identity than to the second series.

Table 3 gives comparable information to Table 2, this time only for Hispanic people in this study. It illustrates (1) the agreement rate for each of the three measures of race and origin and (2) the agreement of each measure with the reported race and origin of the person's parents.

**Table 3.** Agreement Between Each Measure of Race and Origin for Hispanic People.

	Open-Ended	Yes/No	Summary
Open-Ended	-	-	-
Yes/No	63% (15/24)	-	-
Summary	75% (18/24)	54% (13/24)	-
Parents	63% (15/24)	46% (11/24)	67% (16/24)

The results are strikingly different than what we saw with the non-Hispanic respondents in Table 3. The Yes/No measure has much lower agreement rates with the other two measures for Hispanics. This demonstrates that these measures are capturing different concepts of race. This is strong evidence that further research needs to be done on how to capture race and origin for Hispanic respondents because the measures are not being interpreted consistently and are clearly different than for non-Hispanics. These results suggest that the current measure of Hispanic origin should be understood as being highly sensitive to how the question is asked. For example, asking respondent's how they self-identify versus asking them the OMB categories only agrees roughly half the time.

Also, the Yes/No question disagreed with the parents' reported race or origin a majority of the time. Remember there was strong agreement between these two for non-Hispanics. Overall, asking about Hispanic people's parents' race or origins is not consistently the same as the respondents' self-identification (or identification of Person 2's race or origin).

#### 4. Discussion

Based on this research, we saw that the open-ended question series most closely assessed how respondents personally self-identify their race and origin with less influence about what type of information they "should" report than the other two question series. Researchers interested in using an open-ended self-identification as "truth" should consider the possibility that respondents will use non-standard race and origin terms and may use pan terms, like "Asian" instead of specific ethnicities, like "Chinese."

According to findings from these cognitive interviews, the second method of measuring race and origin – the Yes/No questions – most closely assessed racial and ethnic ancestry consistently with the OMB classifications. These questions elicited the most detailed responses and were the most likely to reveal parents' or grandparents' races or origins in interviews where responses were inconsistent across methods. This effect was seen during the Pilot Test, when there were approximately 20 questions in this series, as well as in Round 1, where we used the branching structure of these questions. We did not see the effect in Round 2, possibly indicating that it would occur more for respondents with higher education and socio-economic status than for those with lower education and status.<sup>10</sup> Researchers who are interested in measuring racial background and origin as "truth" should acknowledge that this yes/no method may be more likely to measure genealogical race or origin than the open-ended method.

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<sup>10</sup>Recall that respondents in Round 2 were generally less educated and of a lower socio-economic class than respondents in previous rounds, based on subjective assessments by the researchers. Otherwise, the question structures were largely identical between Round 1 and Round 2.

The third measure was aimed at assessing how respondents would report in a “census” or “usual” context. The “census” context (Round 1) gave insight into respondents’ preconceived notions of response options on a census, as well as how they have responded to these questions in the past. These included respondents thinking they could only respond with one race or origin, and preconceived notions about what the acceptable responses would be. For example, one respondent, who used the terms “Hispanic and Asian” for the first and second methods, reported only “Hispanic” for the third method because she said she is usually forced to pick one race or origin on forms. The “usual” context (Round 2) gave insight into how respondents most commonly respond to race and origin questions. This particular question was interpreted in multiple ways, from responses to a written survey, to responses to others (both familiar and unfamiliar people) when discussing race and origin. A respondent in Round 2 used the terms “Caucasian” and “White” for the first and second methods, but reported “Italian and European Spanish” for the third method, as an elaboration to others who usually assume she is White by her physical features.

Researchers interested in these methods as “truth” should consider responses to these questions as highly specific to the context presented by the question text. We found this third question to be the most sensitive to the exact wording that we used, and we indeed found different results in the several different versions of the question wording that we tested. We found the final question wording – which implemented a “usual” context and reminded respondents that 1) they could report the same thing they already reported, or something different, and 2) they could report more than one race or origin – worked well in this context to establish a summary of how they usually report. For this method we had a couple of interesting responses where respondents reported more than just a simple answer. In a practice interview, one respondent indicated “If it’s optional, I won’t answer. If there’s no blank, I will check White. If there is a blank, I will fill in Jew.” Similarly, another respondent told us that she usually says “I prefer not to say,” “I don’t know,” or “more than one race.” One unique aspect of asking what respondents usually say is that, while you may get an honest answer, it may not be an easily classifiable one.

In the end, we did not come up with a single true measure of race and origin. Rather, we ended with a series of three measures that we believe will show a comprehensive picture of race and origin. In no case did we find out information in the debriefing that told us that the true self-identity of a person had not been reported in at least one of the three measures. On the one hand, race reporting is captured relatively well by any one measure; especially for the non-Hispanics in our convince sample. On the other hand, the measures disagreed to some degree for all respondents, and most so for Hispanics. Overall, of the 59 people who were given all three measures, 35 of them provided the same race or origin for each (However, keep in mind that we recruited respondents for complex racial situations and this statistic is not generalizable to the population as a whole.) There were only three people for whom all three measures disagreed. Two of these were reported by the same person, and they did not agree, in part, because this was the person with very low education who reported “nothing” to the third measure. She had reported Hispanic only to the first measure and White Hispanic to the second. The other person who had completely inconsistent responses was a Person 2, whose mother had a different view of their race and origin than the daughter did. There is no simple way to determine what level of agreement is acceptable. In this study, this variability was higher for Hispanics than non-Hispanics. Reports of race and origin using these measures should be seen in this light.

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