An Experimental Comparison of Methods of Measuring Ethnicity

Tom W. Smith

NORC/University of Chicago

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Introduction

As past research has demonstrated (Hahn, Truman, and Barker, 1996; Lieberson and Waters, 1993; Phinney, 1996; Smith, 1980; 1983; 1985; 1995; 1997; 2001; Waters, 1990), ethnicity and race are labile constructs that are sensitive to measurement methods. The latest manifestation of this trait appeared on the 2002 General Social Survey (GSS)(Davis, Smith, and Marsden, 2005).1 The 2002 GSS was the first GSS to use computer-assisted personal interviewing (CAPI) rather than the traditional paper-and-pencil interviewing (PAPI). An analysis of CAPI/PAPI differences (Smith and Kim, 2003) suggested that large mode effects occurred on ethnicity. Many more multiple mentions of ethnicity were given in 2002 than in previous years. Those mentioning only one ethnicity had been rising from 48% to 53% in 1996-2000, but fell to 39% in 2002 and conversely those mentioning 2+ ethnicities and selecting a main ethnicity rose from 28% in 1998-2000 to 39% in 2002 (Smith and Kim, 2003).

As Figure 1 shows, the PAPI ethnicity question consists of a two-part question. The first asks "From what country or part of the world did your ancestors come?" It allows for up to three mentions. There are four spaces to record answers, one space for single mentions and three more spaces labeled first, second, and third mentions. If two or more ethnicities are mentioned, then respondents are asked "Which one of these countries do you feel closer to?" In response to that, either a primary ethnicity is recorded or if respondents can not choose between their backgrounds, a "can't decide" code is entered.

The 2002 CAPI version asks the same questions, but implements the data capture in a slightly different manner. After asking the "from what country" question and recording an initial mention, the screen refreshes, relisting the question and the national codes to record a possible second mention. If a second mention is given, the screen refreshes a second time. If a third mention is given, the program moves on to the "closer to" question. Besides the national codes on the refreshed screens, there is also the option "99 NO MORE COUNTRIES" appearing on the top left of the first column of national codes. While there is no explicit prompt for more responses, the repetition of the initial question and the national codes in effect acts as a prompt.

Experiment

To test the hypothesis that the differences observed on the

1 The GSS is a national, in-person full-probability sample of adults living in households in the United States. Full methodological information appears in Davis, Smith, and Marsden (2005). See also www.gss.norc.org.

2002 GSS were the result of the switch in mode to CAPI, a randomized, split-ballot experiment was designed for the 2004 GSS. One half of the sample received the CAPI version used in 2002 or the multiple-screens version. The other half of the sample received a revised CAPI version that used only one screen to more closely replicate the PAPI version (See Figure 2). In the example shown in Figure 2, the respondent mentioned three ethnicities which are shown on the bottom of the top screen. Then the three mentioned ethnicities appear on the bottom screen and the respondent selected the middle one as his/her main ethnicity. Split-ballot randomization is a regular feature of the GSSs (Davis, Smith, and Marsden, 2005) and on the 2004 GSS, as in earlier years, the randomization successfully drew two equivalence samples of respondents.

If these two versions produced results similar to the CAPI/PAPI differences observed between the pre-2002 PAPI GSSs and the 2002 CAPI GSS and if the one-screen, PAPI-like version produced results similar to the 2000 PAPI GSS, then CAPI could be accepted as the cause for the differences on ethnicity in the 2002 GSS.

Analysis

Table 1A shows large and highly statistically significant differences across the two ethnicity methods used in the 2004 GSS experiment. Single ethnicity mentions were much higher on the one-screen, PAPI-like version than on the multiple-screens version (58% vs. 40%). Multiple mentions involving both choosing a main ethnicity and not selecting a main ethnicity were notably higher on the multiple-screens version rather than on the one-screen, PAPI-like version (respectively 35% mentioning 2+ ethnicities and choosing one on the former and 25% on the later and 17% mentioning 2+ ethnicities and not being able to select one on the former and 9% on the later). There were no differences on being unable to name any ethnicities (8% for both methods) or in giving uncodeable responses(less than 1% for both). Likewise, Table 1B shows that the mean number of ethnicities mentioned was higher on the multiple-screens version than on the one-screen, PAPI-like version (1.6 vs. 1.4). Table 1B also finds that there were no differences in the number of racial mentions by split-ballot. This indicates that there are no real differences in the complexity of respondents' ethno-racial backgrounds across the experimental samples. Thus, the observed differences in ethnic mentions appear due to the mentions experiment rather than any real ethno-racial differences across the experimental samples.

Table 2 shows that the experimental differences closely line up with comparisons to the earlier PAPI and CAPI readings. The one-screen, PAPI-like version produces distributions similar to

the 2002 PAPI GSS (Table 2A). There is however a small statistically significant difference (prob.=.025). This might mean that the one-screen, PAPI-like version still did not exactly duplicate the PAPI version. However, the main difference is that 2004 is 5.1 percentage points higher than 2000 on naming only one country and this is consistent with a trend in the 1996-2000 GSSs in which single mentions of ethnicity rose 5 points (Smith and Kim, 2003). Thus, it is probable that the difference largely reflects true change. There was no statistically significant difference in the mean number of ethnicities mentioned (Table 2C).

The 2002 and 2004 multiple-screens versions are also quite similar, but also show a statistically significant difference (Table 2B). The shift was consistent with the direction of change indicated by the one-screen, PAPI-like version (Tabl2 2B). However, while the mode and format of the 2002 and 2004 multiple-screens versions were exactly the same, a new sample frame and a new method of handling temporary non-respondents were adopted in 2004, so the observed difference could reflect measurement variation as well as true change. There was no statistically significant difference in the mean number of ethnicities mentioned (Table 2C).

Despite the large differences in the number of ethnic mentions across the mode experiment, there was no statistically significant difference in the specific ethnicities mentioned either for the summary measure, ETHNIC (prob.=.104), or for the first, second, or third ethnicities mentioned - ETH1, ETH2, ETH3 (respectively prob.= .077; .131; .518).

Conclusion

The 2004 GSS mode experiment essentially confirms that the large rise in multiple ethnic mentions on the 2002 GSS was a mode effect resulting from the shift to CAPI. For many people ethnicity is both not highly salient and multi-faceted. Given the complex and latent nature of many people=s ethnic identity (Turner and Martin, 1984), small changes in the format of questions can have a large impact on reports of ethnicity even when the wording of items and explicit instructions are not altered. Specially, the CAPI-version that encouraged interviewers to record more ethnic mentions drew on the weak, multiple identities that many Americans have and generated more reports of ethnicities. However, despite the notable increase in ethnic mentions, there was no statistically significant impact on the distribution of ethnicities mentions. Thus, while the number of ethnicities mentioned was labile and sensitive to mode effects, the distribution of ethnicities was robust.

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Table 1

Experimental Comparison of Ethnicity Questions

A. Ethnic Identity[a]

	One Screen/ PAPI-Like	Multiple-Screens
Names One	57.6%	39.6%
Names Two+, Chooses One	25.3	34.9
Names Two+, Can=t Choose	8.9	17.1
Can=t Name Any	7.8	7.6
Uncodeable	0.4	0.8
	(1398)	(1416)
	Prob.=.0000	

B. Mean Number of Ethnicities/Races Mentioned and Standard Errors[b]

Ethnicity	1.41(.022)	1.64 (.024)
	Prob.=.0000	
Race	1.05 (.006)	1.06 (.007)
	Prob.=.611	

Notes:
[a]The GSS variables ETHNUM classifies respondents into the five categories in Table 1A based on whether they mention more than one ethnicity and, if so, they say they are closer to one ethnicity.
[b]Number of Ethnicities counts how many are mentioned in ETH1, ETH2, and ETH3. Number of races is compiled in a similar manner from the separate questions on race (RACECEN1, RACECEN2, RACECEN3).

Table 2

Experimental Methods Compared to Baseline Readings

A. One-Screen, PAPI-Like Method

	2000		2004
Names One	52.5%		57.6%
Names Two+, Chooses One	27.6		25.3
Names Two+, Can=t Choose	10.7		8.9
Can=t Name Any	8.9		7.8
Uncodeable	0.3		0.4
	(2817)		(1398)
		Prob.=.025	

B. Multiple Screens

	2002		2004
Names One	38.6%		39.6%
Names Two+, Chooses One	39.1		34.9
Names Two+, Can=t Choose	14.3		17.1
Can=t Name Any	7.7		7.6
Uncodeable	0.3		0.8
	(2766)		(1416)
		Prob.=.008	

C. Number of Ethnicities Mentioned

	2000		2004
One-Screen,PAPI-Like	1.44		1.41
		Prob.=.209	
	2002		2004
Multiple Screens	1.66		1.64
		Prob.=.526	

Figure 1: Ethnicity

23. From what countries or part of the world did your ancestors come?

IF SINGLE COUNTRY IS NAMED, REFER TO NATIONAL CODES BELOW AND ENTER CODE NUMBER BELOW.

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IF MORE THAN ONE COUNTRY IS NAMED, REFER TO NATIONAL CODES BELOW, CODE UP TO 3 RESPONSES AND THEN ASK A . . .

FIRST MENTION _____

SECOND MENTION _____

THIRD MENTION _____

A. **IF MORE THAN ONE COUNTRY NAMED:** Which one of these countries do you feel closer to?

IF ONE COUNTRY NAMED, REFER TO CODES BELOW AND ENTER CODE NUMBER ON LINE BELOW. IF CAN'T DECIDE ON ONE COUNTRY, ENTER CODE 88.

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NATIONAL CODES

Africa	1	Mexico	17
American Indian	30	Netherlands (Dutch/Holland)	18
Austria	2	Norway	19
Belgium	36	Philippines	20
Canada (French)	3	Poland	21
Canada (Other)	4	Portugal	32
China	5	Puerto Rico	22
Czechoslovakia	6	Rumania	35
Denmark	7	Russia (USSR)	23
England and Wales	8	Scotland	24
Finland	9	Spain	25
France	10	Sweden	26
Germany	11	Switzerland	27
Greece	12	Yugoslavia	34
Hungary	13	Other (SPECIFY)	29
India	31	_____	
Ireland	14		
Italy	15	MORE THAN ONE COUNTRY/CAN'T	
Japan	16	DECIDE ON ONE	88
Lithuania	33	DON'T KNOW	98

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Figure 2

One-Screen, PAPI-Like Version