Multiple Race Data: Bridging Different Survey Datasets

Quantitative researchers in education, as in other subject areas, may encounter survey-based data that have captured the race-ethnicity variable in different formats. The IPEDS format that uses a multiple-response format is one example of a format that may differ from the way other studies and surveys have recorded the race-ethnicity of students, faculty, or staff. A recent analysis by Liebler & Halpern-Manners proposes a remedy (that modifies a method developed by the National Center for Health Statistics). They make the following points, among others, as they discuss this data issue:

1. [sociology, public health, and education need] “…practical methods for incorporating newly complex race data into analyses that require consistent measures of race…Unlike other race bridging methods, researchers can apply the modified regression method to a wide variety of commonly used and publicly available microdata sets, thereby avoiding the pitfalls of folding all multiracial persons into a single residual category or dropping such cases altogether. While still reflecting respondents’ race responses, the modified regression method allows researchers to make relatively accurate cross-time comparisons by retaining historically consistent and substantively meaningful groupings of people…” [pp. 152-153]

2. “In terms of historical consistency, the modified regression method provides more accurate results than unabridged estimates…The results in Figure 1 provide a demonstration of the face validity of the modified regression method…Whereas the income estimates generated unbridged all-inclusive method vary by as much as 14% from the CPS [Current Population Survey] benchmark, the modified regression method provides a much closer approximation of the CPS results for each of the years in question…” [p. 152]

3. [Technically speaking] “The bridging equations in the modified regression method use individual-level and contextual information about multiple-race respondents to assign each multiracial person four weights. Each weight represents the predicted probability that the person would have reported that particular single race…These weights can be used for fractional assignment; alternatively, the individuals can be wholly assigned to their most heavily weighted single race…Note that unlike whole assignment, fractional assignment retains information about each of the respondents’ self-reported races—an identification that includes two or more groups on purpose…this enhanced sensitivity allows the bridge to provide a better approximation of the previous race question format…” [pp. 148-9]

4. “At the individual level, bridged race should be treated with caution. A person’s bridged race is a point estimate with a high standard error because the independent variables in the bridging regression explain only a small part of the variance captured in the complex race question…Bridged estimates were developed with the intention of generating aggregate-level statistics, so that errors at the individual level would average out. One consequence of high error at the individual level is that bridge race is not appropriate for use as a dependent variable…” [p. 150]

Carolyn A. Liebler and Andrew Halpern-Manners (both from the Dept. of Sociology and Minnesota Population Center, University of Minnesota) provide details in an article (“A Practical Approach to Using Multiple-Race Response Data: A Bridging Method for Public-Use Microdata”) published by the peer-reviewed journal *Demography* (February 2008, Vol.45, no.1, pp. 143-155). Interested parties may contact the authors for the specific details on how to download the computer routine for the method. Readers with some background in social statistics will find the content and style of the paper accessible.

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