

No Time for Tweaking

By

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The Census Bureau is deep into planning for the 2030 Census but there seems to be two different visions of what is needed.

On one hand, the overall net error rate in the 2020 Census was only 0.24 percent, which is excellent by historic and international standards. The overall error rate in the 2010 Census was a 0.01 percent net overcount and in the 2000 Census it was 0.49 percent net overcount. Given this result, one might think that only minor methodological tweaks are needed in the 2030 Census.

On the other hand, the net coverage error masks some big problems in the 2020 Census. Many vulnerable groups had higher error rates in 2020 than in 2010. For example, based on the Census Bureau's Post-Enumeration Survey results the net undercount of the Hispanic population went from 1.54 percent in 2010 to 4.99 percent in 2020. The net

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undercount rate for the Black population (alone or in combination) went from 2.06 percent in the 2010 Census to 3.30 percent in the 2020 Census.³ At the same time, the net overcount of the Non-Hispanic white (Alone) population doubled from 0.83 percent in the 2010 Census to 1.64 percent in the 2020 Census. Many differential undercounts were larger in the 2020 Census than in the 2010 Census.

But perhaps the most vexing problem in the 2020 Census was the continued rise in the net undercount of young children. Children ages 0 to 4 saw their net undercount rate go from 4.6 percent in 2010 to 5.4 percent in 2020, based on the Census Bureau's Demographic Analysis method. The net undercount of young children has risen steadily from 1.4 percent in the 1980 Census to 5.4 percent in the 2020 Census. In other words, the high net undercount of young children has been a key problem for the U.S. Census for many decades (O'Hare 2019).

In one blog, the Census Bureau (2024) says "our focus this decade is on enhancing rather than re-envisioning the 2020 Census design to achieve a complete and accurate count." In response to this approach by the Census Bureau, the Census Quality Reinforcement Task Force (2023)

³ This increase was not statistically significant, but it was large and in the wrong direction.

summarized the Census Bureau's approach to the 2030 Census as, 'But the 'enhanced 2020 approach' described will not be adequate for meeting the Census Bureau's commitment to producing data that depict an accurate portrait of Americans, including its underserved community.'" The Census Bureau approach has been described as "tweaking" the 2020 design.

Does tweaking work? With respect to the net undercount of young children there is no evidence that tweaking language on census forms improves the count of young children. In the American Community Survey test on improving the household roster to gain a more accurate count of young children, conducted in 2022 (U.S. Census Bureau 2023) the Census Bureau experimented with a language change. The control version and the test version of the rostering questions are shown below.

Figures 2 and 3 below show the kinds of wording changes examined in the ACS roster test.

Figure 2. Control: Paper Version Household Roster

➔ **How many people are living or staying at this address?**

- **INCLUDE** everyone who is living or staying here for more than 2 months.
- **INCLUDE** yourself if you are living here for more than 2 months.
- **INCLUDE** anyone else staying here who does not have another place to stay, even if they are here for 2 months or less.
- **DO NOT INCLUDE** anyone who is living somewhere else for more than 2 months, such as a college student living away or someone in the Armed Forces on deployment.

Number of people

➔ **Fill out pages 2 – 7 for everyone, including yourself, who is living or staying at this address for more than 2 months. Then complete the rest of the form.**

Figure 3. Roster Test: Paper Version Household Roster

➔ **How many people, including yourself, live or stay at this address?**

INCLUDE...

- ✓ anyone not related to you, like roommates and other families.
- ✓ babies and children, related or unrelated, including grandchildren and foster children.
- ✓ everyone staying here now who has no other place to stay.

DO NOT INCLUDE anyone living somewhere else, such as...

- X a college student living away.
- X someone in the Armed Forces on deployment.

Number of people

➔ **Fill out pages 2 – 7 for everyone, including yourself, who is living or staying at this address. Then complete the rest of the form.**

Evaluation of this language change by the Census Bureau (U.S. Census Bureau 2023, page 25) concluded, “The results of the person-level analysis shown in Table 7, indicate that the Control and Test Versions do not differ significantly on the number of young children, ages 0 to 4, on the final roster in any of the modes examined.”

In the 2020 Census, the Census Bureau tweaked questionnaire language compared to the language in the 2010 Census. Many of these changes were documented by Deaver (2021) and a couple of such changes are shown below.

Production – Clarifying Language

Updated the language on the primary solicitation materials (invitation letter and questionnaire) that most households received in 2020.

“...all adults, children, and babies living or staying at this address.”

instead of...

“...everyone living or staying at this address”

Production – Probing Language

- Updated the wording of the undercount probe on the questionnaire to specifically mention “grandchildren” and “unrelated” children.
- Automated instruments allowed respondents to add these people in real time.

<p>2010 Undercount Probe</p>	<p>2. Were there any <u>additional</u> people staying here April 1, 2010 that you <u>did not include</u> in Question 1? Mark <input checked="" type="checkbox"/> all that apply.</p> <p><input type="checkbox"/> Children, such as newborn babies or foster children</p>
<p>2020 Undercount Probe</p>	<p>2. Were there any <u>additional</u> people staying here on April 1, 2020 that you <u>did not include</u> in Question 1? Mark <input checked="" type="checkbox"/> all that apply.</p> <p><input type="checkbox"/> Children, related or unrelated, such as newborn babies, grandchildren, or foster children</p>

The wording changes by the Census Bureau were not evaluated directly but the increase in the net undercount of young children from 4.6 percent in 2010 to 5.4 percent in 2020 suggests the tweaks did not have much, if any, positive impact.

The bottom line is summed up well by a recent recommendation from the National Advisory Committee to the Census Bureau (2024),

“The current methods employed by the U.S. Census Bureau to identify and count young children have not worked. The problem is getting worse. The Census Bureau needs to evaluate new methods, operations, and strategies to improve the undercount of young children. Such changes need to be well-tested before they are used in the 2030 census.”

It is my understanding that in the 2026 Census test the Census Bureau is going to be testing the idea of adding young children to the rosters based on their presence in administrative records. But one new strategy alone will not solve this complex problem. We need more of this kind of bold idea.

References

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