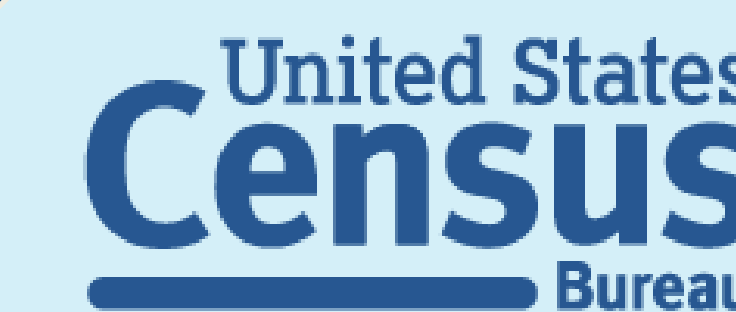


Relating Census Bureau Metrics of Contextual Diversity to Implicit Biases

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Any opinions and conclusions expressed herein are those of the authors and do not reflect the views of the U.S. Census Bureau. Disclosure Approval # CBDRB-FY22-CES014-035



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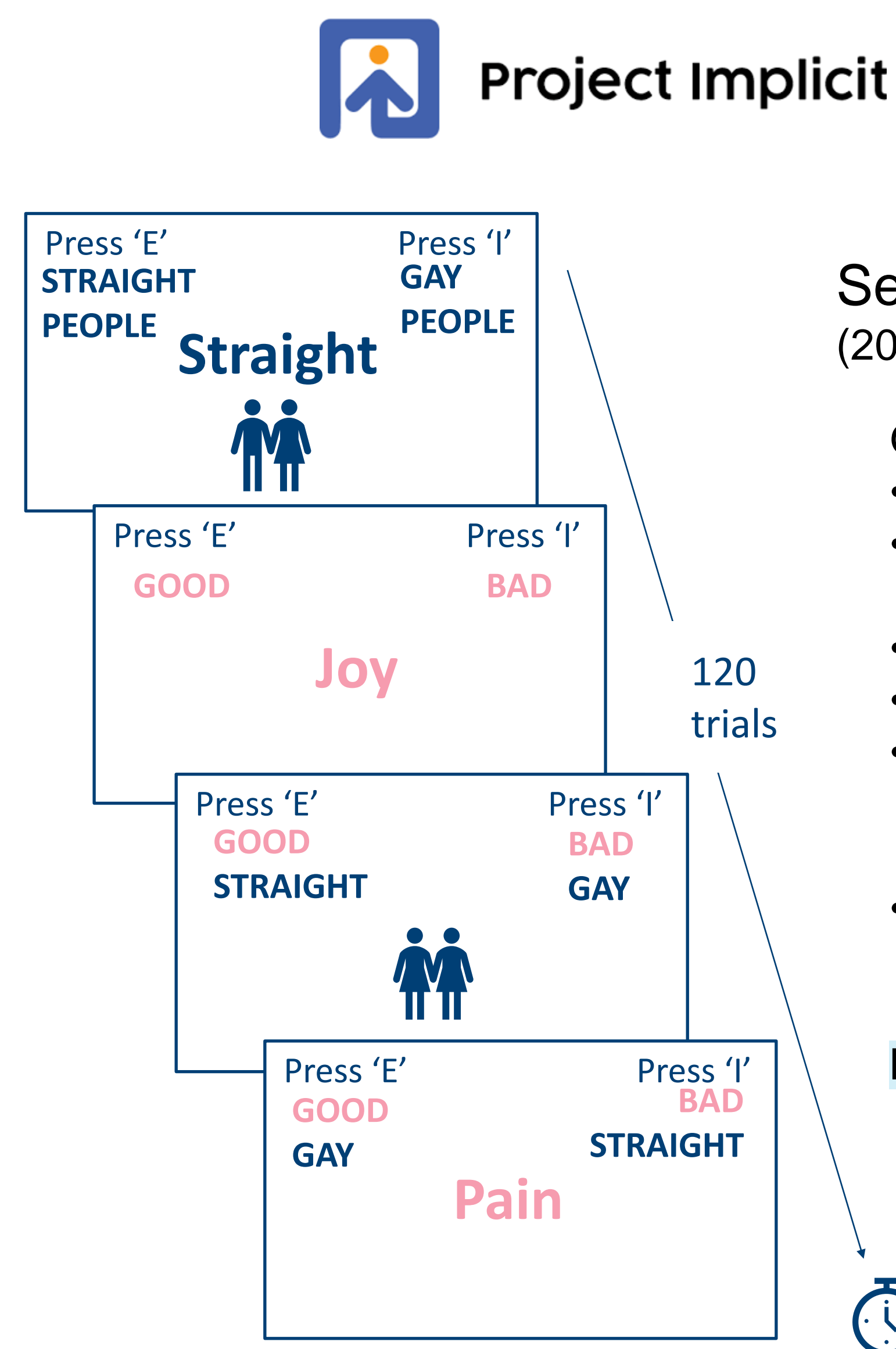
Question

Does exposure to one form of contextual diversity (racial) cognitively generalize to predict implicit biases to other social groups (sexual orientation)?

Background

- Exposure to contextual (racial) diversity has cognitive implications...
 - Creative & divergent thinking^{1, 2}
 - Greater mentalizing, less stereotypic processing³
 - Less biased perceptions of racial groups^{4, 5, 6}
- Intergroup contact can generalize to other social groups (e.g., contact with immigrants relates to perceptions of homeless, religious minorities)^{7, 8}
- Do contextual diversity effects also generalize to other social groups?

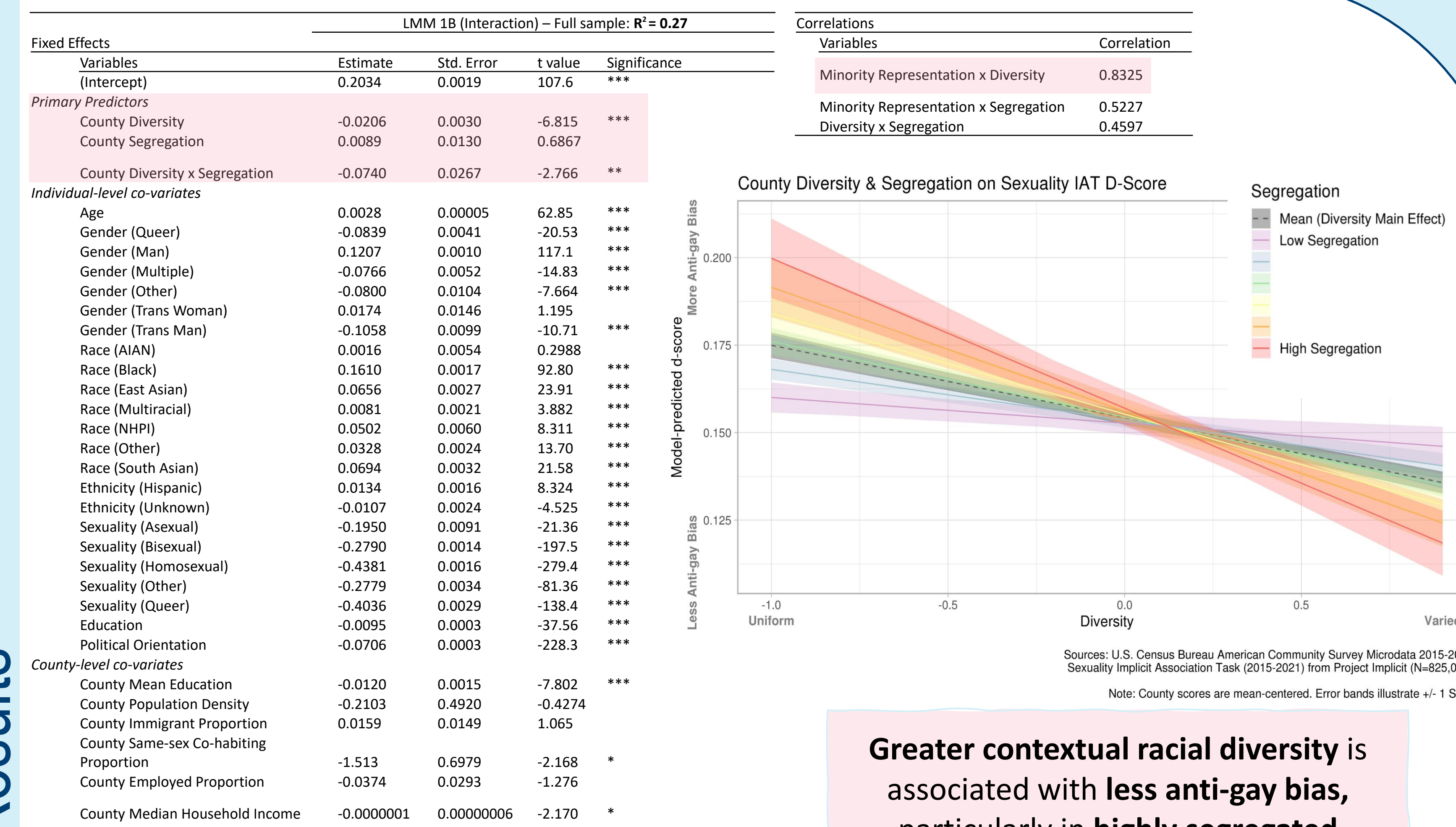
Implicit Association Task



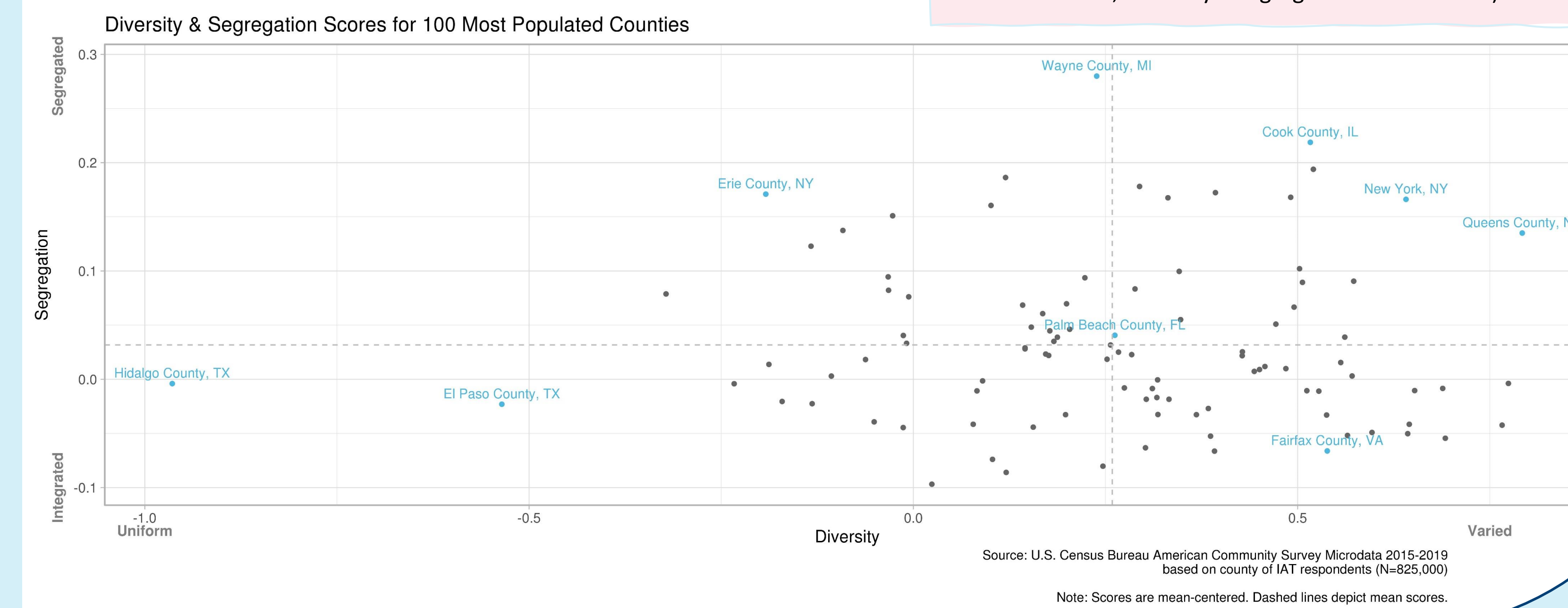
Sexuality IAT (2015-2021)

- Omitted...
- Under 18 YO
 - Outside of USA (50 states + DC)
 - No geography
 - Incomplete task
 - > 10% trials with latency faster than 300 ms
 - In a county with fewer than 30 observations

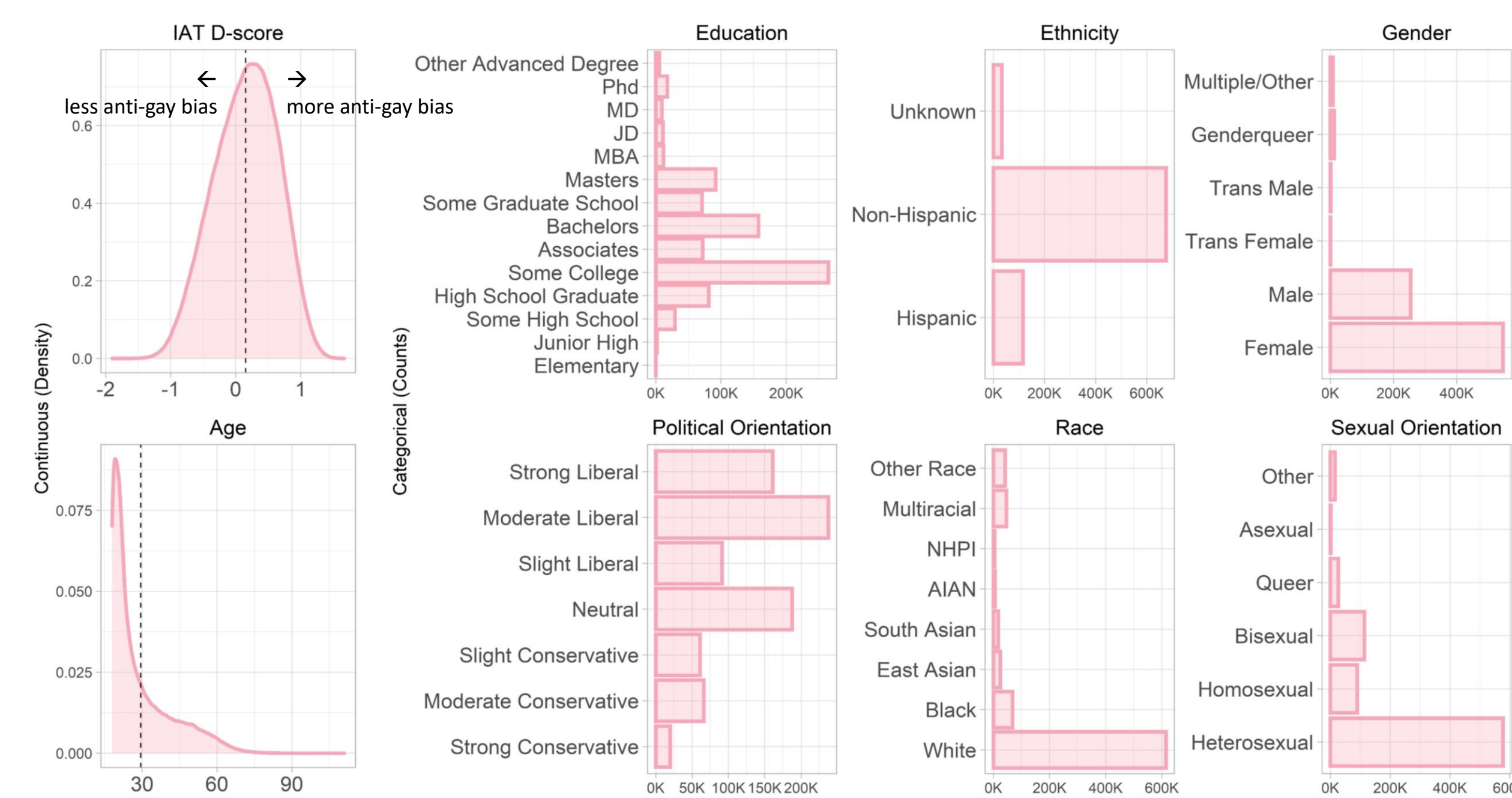
Results



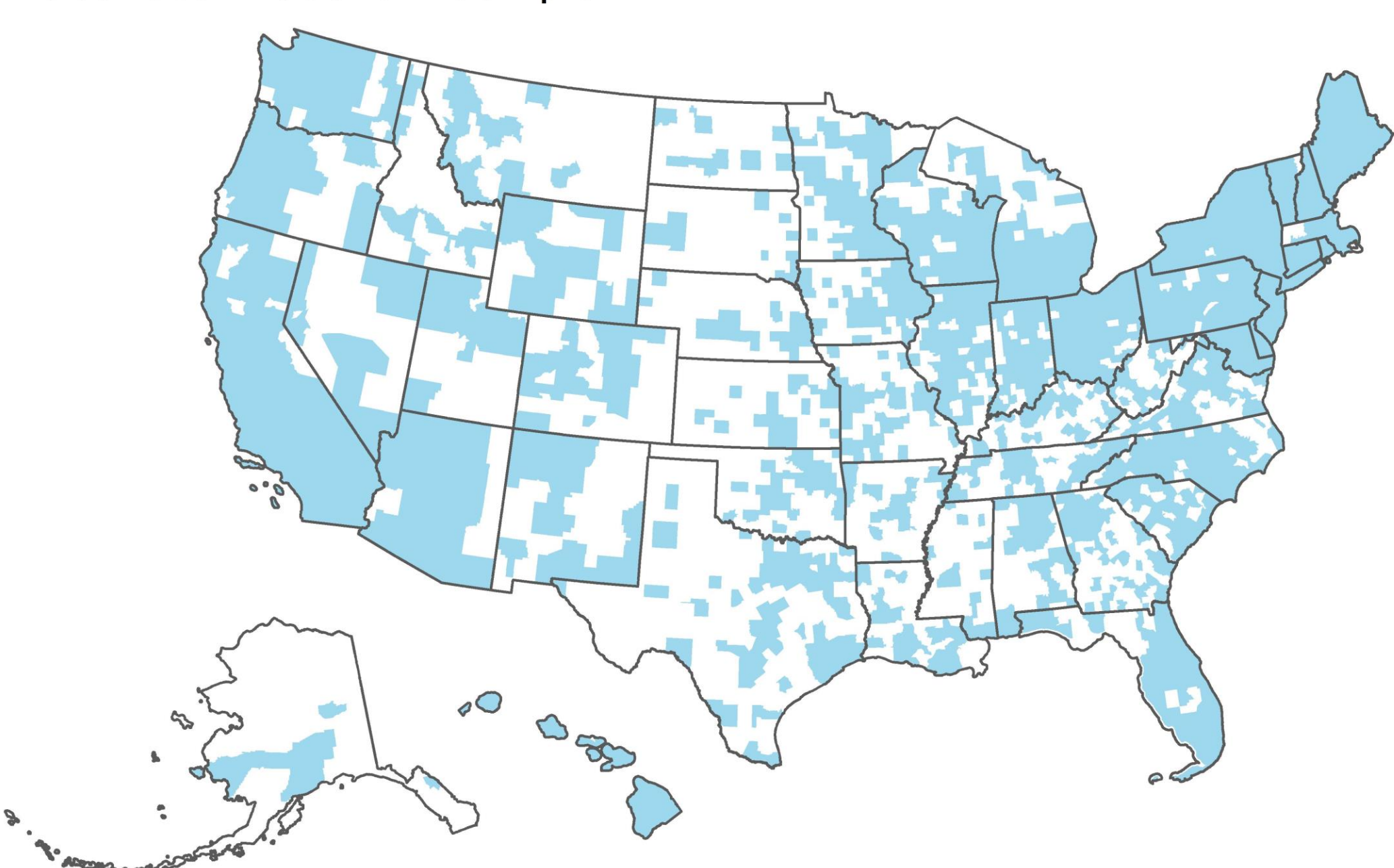
Greater contextual racial diversity is associated with less anti-gay bias, particularly in highly segregated counties (cognitive generalization). Same for straight-only (Diversity: B = -0.024***; Diversity x Segregation: B = -0.082***).



Sample & Contextual Measures



Counties Present in Sample

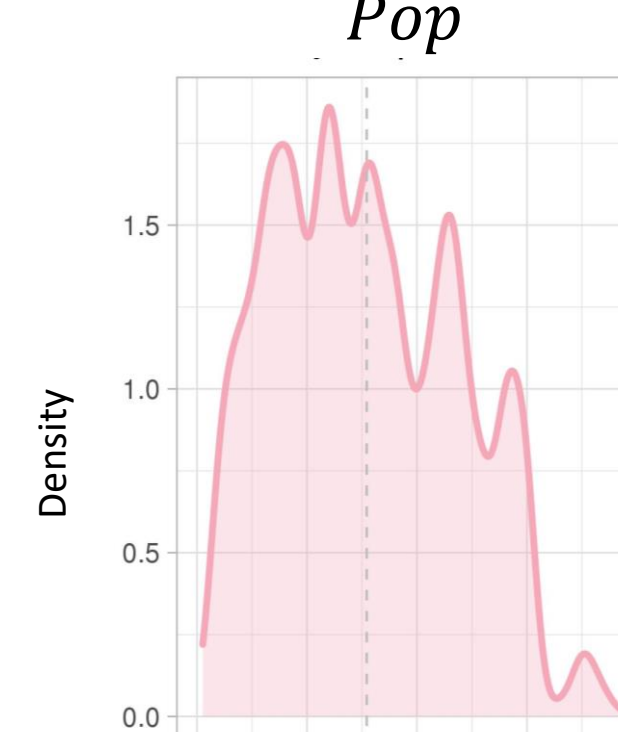


Source: Sexuality Implicit Association Task (2015-2021) from Project Implicit. Restricted to counties with at least 30 observations (N=1609)

American Community Survey (2015-2019)

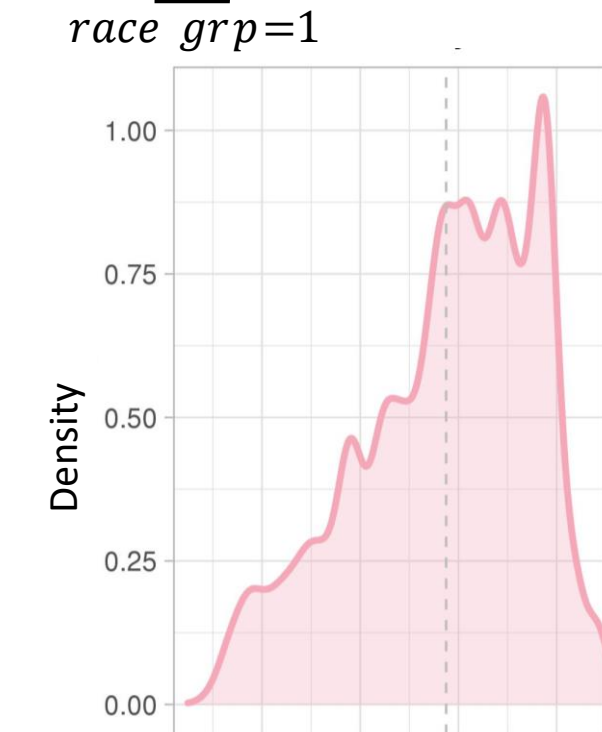
Minority Representation (0-1)

$$= \frac{Pop_{non-white}}{Pop}$$



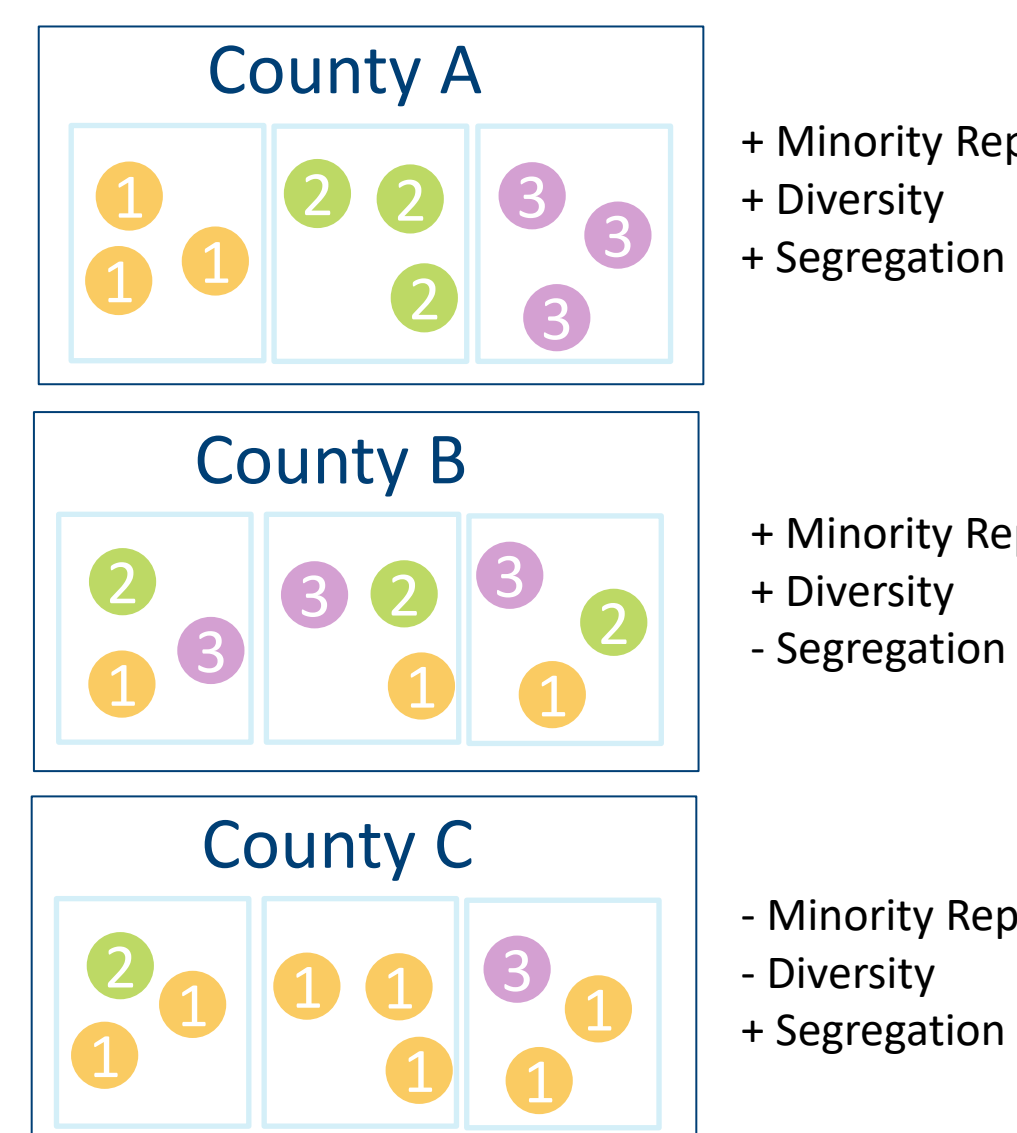
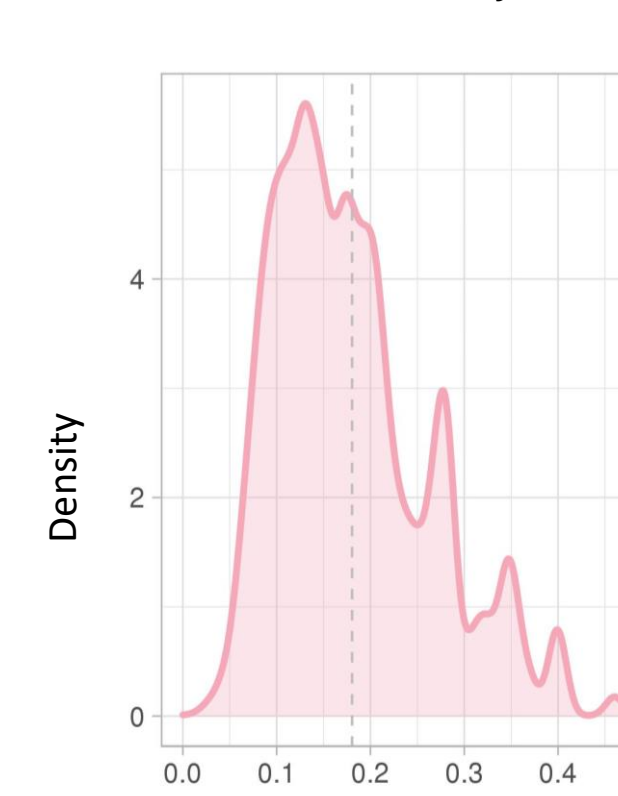
Diversity (Entropy) (0, 3.167)

$$= - \sum_{race\ grp=1}^n P(race) * \log P(race)$$



Segregation (Theil's Index) (0,1)

$$= \sum_{tr=1}^n \left[\frac{Pop_{tract} (Diversity_{county} - Diversity_{tract})}{Diversity_{county} * Pop_{county}} \right]$$



Source: U.S. Census Bureau American Community Survey Microdata (2015-2019) for IAT sample primary residence (N=825,000). Notes: Minimum/Maximum values have been omitted for disclosure avoidance purposes. Dashed lines indicate means. Populations are weighted. 9 Race groups = White, Black, Asian, NHPI, AIAN, MENA, Hispanic, SOR, Multiracial

Strengths & Limitations

- Explored novel, intersectional research questions by connecting population-level data from U.S. Census Bureau to psychological domains.
- Computed geospatially-sensitive measures of racial composition across the country.
- Will also compute novel measures of county-level language diversity and segregation, and test whether they also cognitively generalize to implicit attitudes.
- Correlational nature of analysis → We are conducting time-sensitive analysis of demographic change within counties.
- Non-representative sample from IAT → We are developing sample weights for our IAT respondents.
- Coarse & aggregated IAT geographic data → We are exploring other microdata sources with granular geographical details.

References

- Crisp & Turner, 2011
- Goctowska & Crisp, 2013
- Tiv et al., 2022
- Devos & Sadler, 2019
- Sadler & Devos, 2020
- Devos et al., 2021
- Hewstone & Brown, 1986
- Pettigrew, 2009

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