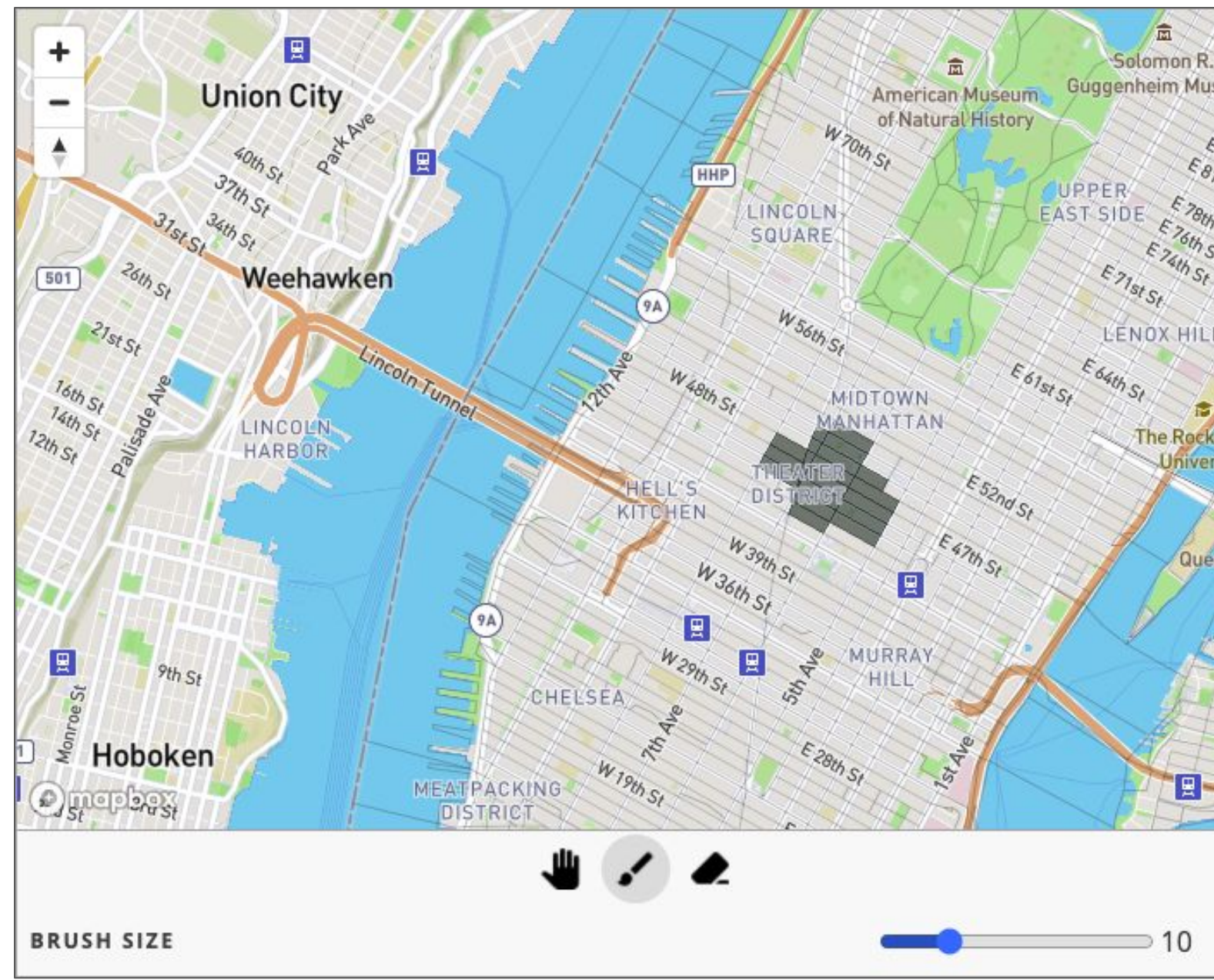


Subjective Neighborhood Identification and Analysis

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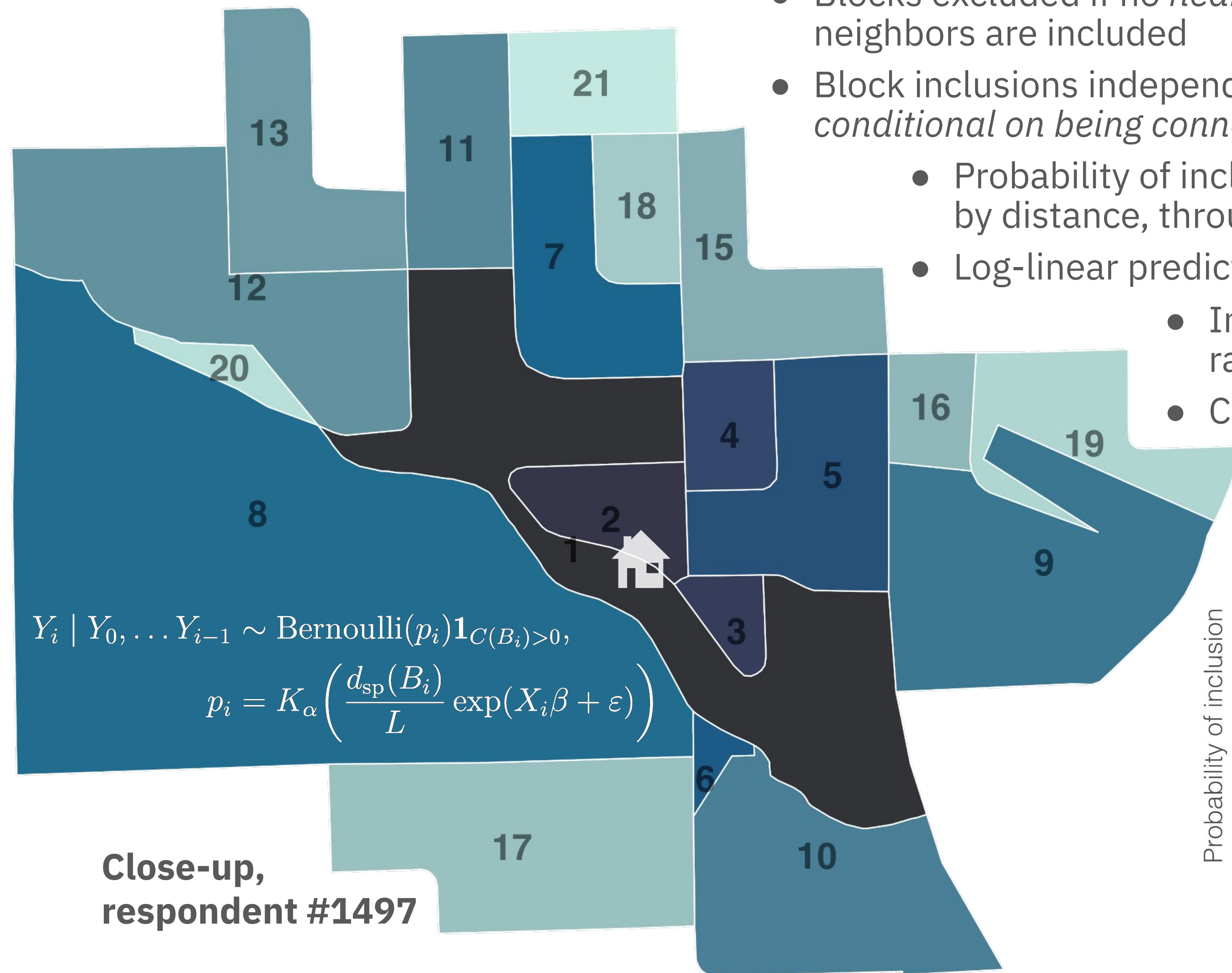
1 We built a **custom survey tool** that allows respondents to easily **draw their neighborhood** on a map.



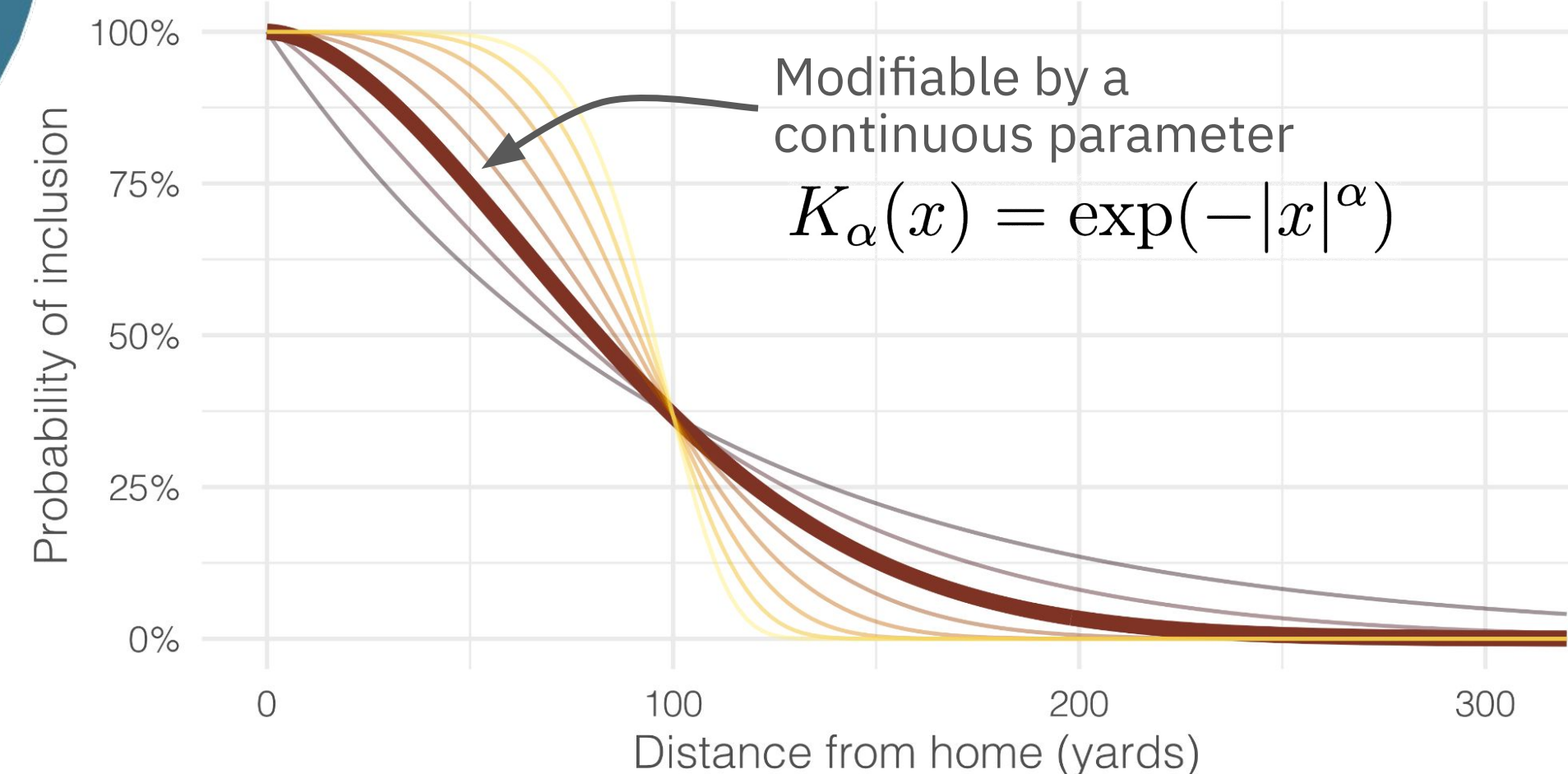
- The TOOL**
- Respondent types in home address and map zooms to local area
 - Respondent can “paint” and “erase” parts of the neighborhood on the map
 - Editor enforces contiguity requirement
- The SURVEY**
- E-mailed to sample of voter file in NYC, Phoenix, and Miami metropolitan areas
 - Collect demographics, political views
 - This poster analyzes only the initial wave of 471 complete responses

2 We fit a **hierarchical Bayesian model** incorporating demographic information and local geographic features.

- Model the probability that each Census block is included in the neighborhood
- Visit blocks one at a time, working outwards from respondent’s home (as below)



Probability of inclusion by distance



Pct. white

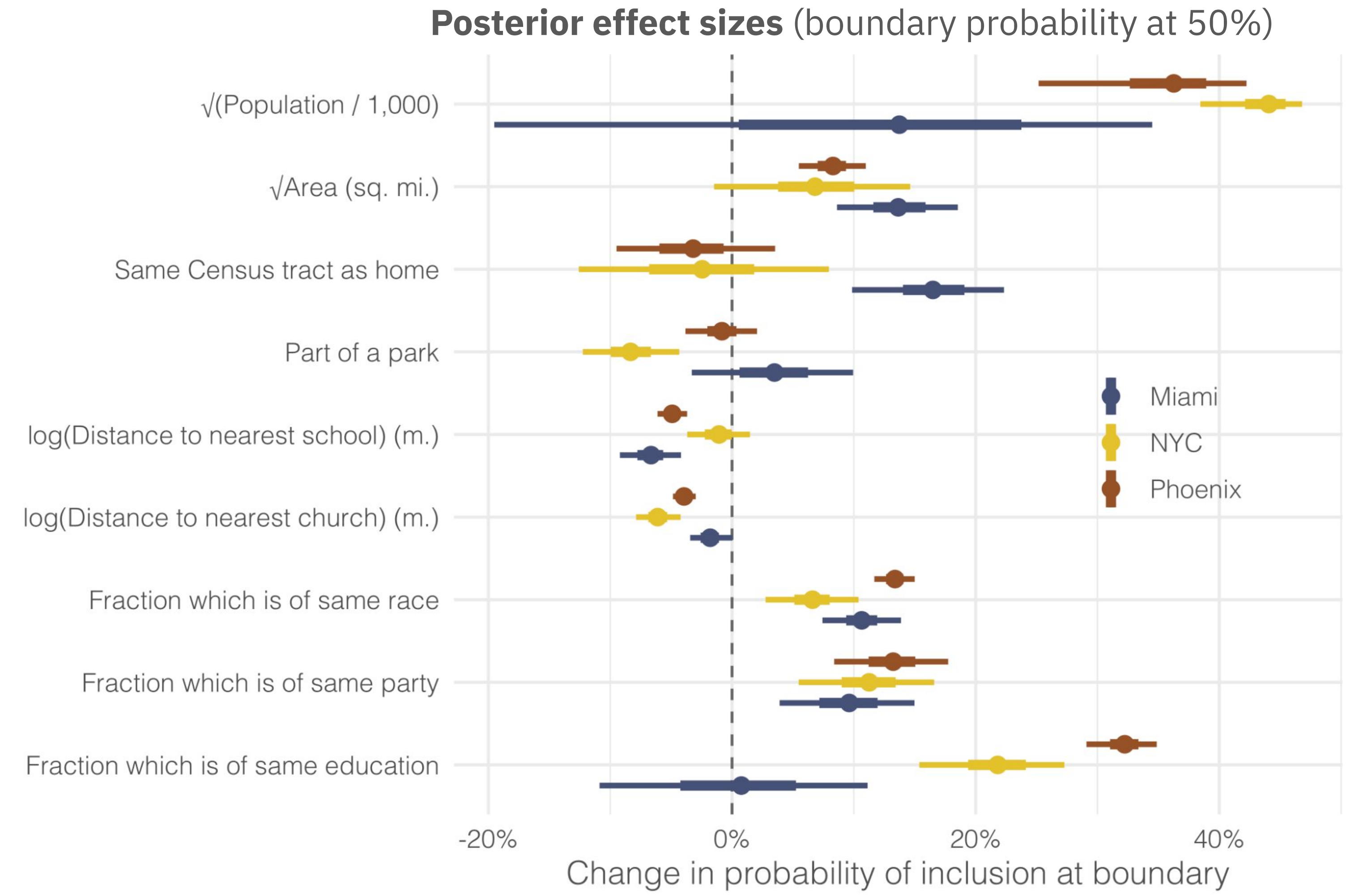
0% 25% 50% 75% 100%

Shown above is the neighborhood and surrounding area of respondent #1497, selected for display due to their location near a strong racial boundary.

471 voters in 3 cities drew us their neighborhoods.

We developed a model to analyze them.

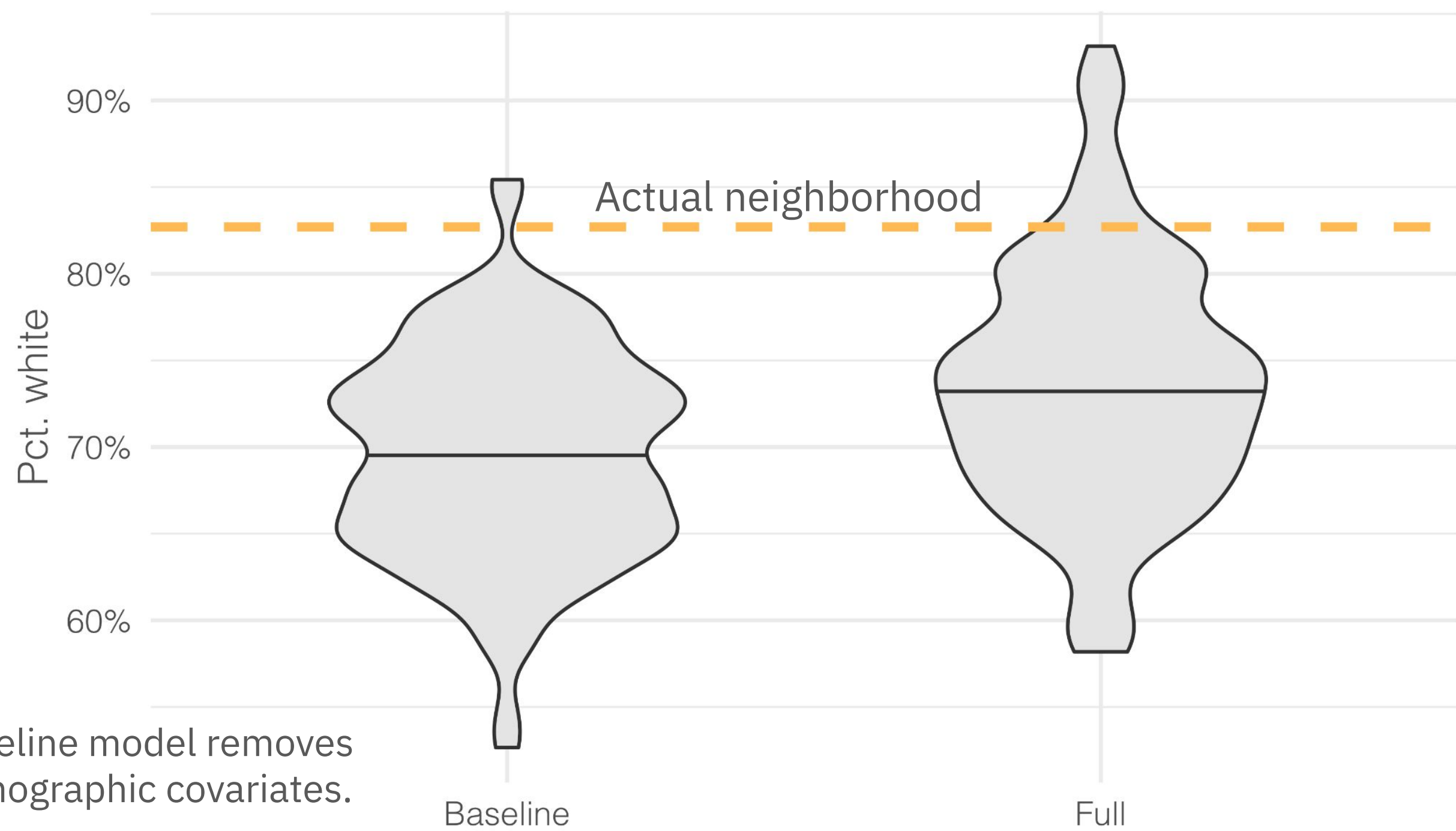
3 Coefficient estimates show the importance of local features, and the **consistent influence of demographics**.



4 We can **simulate from the model** to understand how subjective perceptions of neighborhood are shaped.

Posterior distribution of neighborhood demographics

Respondent #1497: baseline versus full model



Difference in inclusion probability

Baseline model removes demographic covariates.

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4. Huckfeldt, R. & Sprague, J. (1987), 'Networks in context: The social flow of political information', *American Political Science Review* 81(4), 1197–1216.